

WM-FX675

SERVICE MANUAL

Ver 1.1 2001.01

AEP Model
E Model
Australian Model
Chinese Model

- WM-FX675 is almost the same as WM-FX673.
Difference portion and difference parts list from WM-FX673 are described in this service manual.
Please refer to WM-FX673/FX877 service manual (9-926-973-□□) previously issued for other information.

 : Changed portion.

Page	WM-FX673		WM-FX675	
1				
	Model Name Using Similar Mechanism	WM-EX670/EX672	Model Name Using Similar Mechanism	WM-FX673/FX877
	Tape Transport Mechanism Type	MT-WMEX672-162	Tape Transport Mechanism Type	MF-WMFX671-162

• EXPLODED VIEWS

- Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE) . . . (RED)

↑ ↑
Parts Color Cabinet's Color

- Abbreviation

AUS : Australian model

CH : Chinese model

CND : Canadian model

EA : Saudi Arabia model

EE : East European model

FR : French model

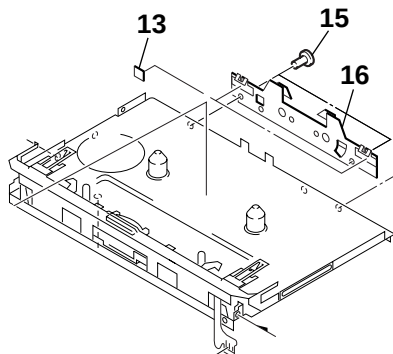
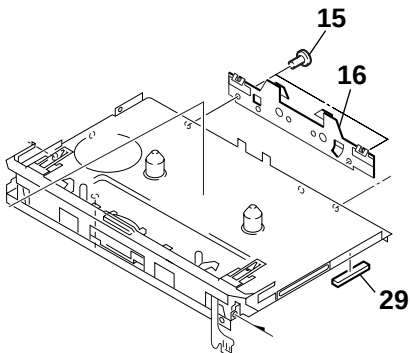
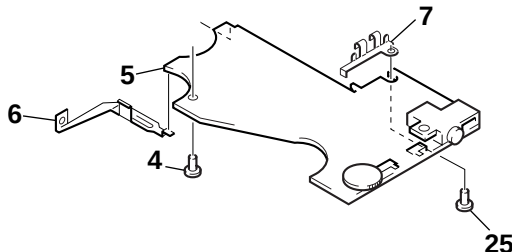
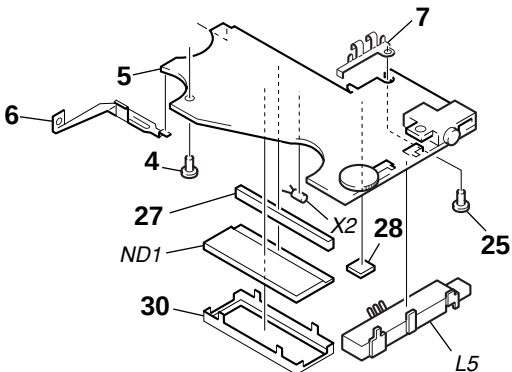
HK : Hong Kong model

JE : Tourist model

KR : Korean model

Page	WM-FX673				WM-FX675			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
32	1	3-704-197-23	SCREW (M1.4X2.5), LOCKING		1	3-704-197-21	SCREW (M1.4X2.5), LOCKING (SILVER)...(GOLD)	
	3	3-034-068-21	LID, BATTERY (FX673/FX877: CH, KR)		1	3-704-197-23	SCREW (M1.4X2.5), LOCKING (BLACK)...(BLUE)	
	5	A-3021-222-A	MAIN BOARD, COMPLETE (EXCEPT FX673: FR/FX877: JE)		3	3-034-068-31	LID, BATTERY (BLUE) (AEP, E, CH)	
	5	A-3021-223-A	MAIN BOARD, COMPLETE (FX673: FR)		3	3-034-068-41	LID, BATTERY (GOLD) (E, AUS, CH)	
	7	3-029-210-01	TERMINAL BOARD (MINUS)		5	A-3021-222-A	MAIN BOARD, COMPLETE (EXCEPT FR)	
	11	3-366-892-11	SCREW (M1.4X1.4)		5	A-3021-223-A	MAIN BOARD, COMPLETE (FR)	
	12	3-029-217-01	LEVER (B), LOCK		7	3-038-056-01	TERMINAL BOARD (MINUS)	
					11	3-939-590-05	SCREW (IB LOCK)	
					12	3-038-054-01	LEVER (B), LOCK	

– Continued on next page –

Page	WM-FX673	WM-FX675
32	133-328-483-11 SHEET 153-366-892-01 SCREW (M1.4) 16X-3376-277-2 BRACKET ASSY 183-704-197-13 SCREW (M1.4X2.0), LOCKING 19X-3377-734-1 LID ASSY (F-S), CASSETTE (FX673/FX877) (SILVER) 20X-3376-279-1 BRACKET (CASSETTE) ASSY 253-375-114-41 SCREW 26X-3377-347-1 CASE (FX-AS3) ASSY (FX673: CND, E, EA, HK, AUS) 26X-3377-357-1 CASE (FX-AS30) ASSY (FX673: AEP, UK, FR, EE) 153-389-523-02 SCREW (IB LOCK) 16X-3377-717-1 BRACKET ASSY 183-704-197-11 SCREW (M1.4X2.0), LOCKING (SILVER)...(GOLD) 183-704-197-13 SCREW (M1.4X2.0), LOCKING (BLACK)...(BLUE) 19X-3380-295-1 LID ASSY (FX675ML), CASSETTE (BLUE) 19X-3380-296-1 LID ASSY (FX675MN), CASSETTE (GOLD) 20X-3377-719-1 BRACKET (CASSETTE) ASSY 253-893-942-11 SCREW (1.7X3), TAPPING (B) 26X-3379-760-1 CASE (FX675ML) ASSY (BLUE) (E, KR, CH) 26X-3379-761-1 CASE (FX675MN) ASSY (GOLD) (E, AUS, CH) 26X-3379-762-1 CASE (FX675MOL) ASSY (BLUE) (AEP, HK) 26X-3379-763-1 CASE (FX675MON) ASSY (GOLD) (AEP, HK) 271-694-502-11 CONDUCTIVE BOARD, CONNECTION 283-037-784-01 CUSHION (F-E) 293-038-525-01 SHEET (F-J) 303-034-073-01 HOLDER (LCD) L51-754-046-11 ANTENNA, FERRITE-ROD ND11-803-469-11 DISPLAY PANEL, LIQUID CRYSTAL X21-577-262-11 VIBRATOR, CRYSTAL	1313 1515 1616  1515 1616 2929 
	55 66 44 77 2525  55 66 44 77 2525 2727 ND1ND1 3030 L5L5 2828 	

Page	WM-FX673	WM-FX675
33	(2) MECHANISM DECK SECTION (MT-WMEX672-162)	(2) MECHANISM DECK SECTION (MF-WMFX671-162)
	51 X-3377-039-1 HOLDER (F) ASSY (/M) (FX673) 53 3-029-271-01 SPRING (HD) 67 3-029-280-01 BELT (F2) 68 3-029-287-01 SPRING (TG), TORSION 69 3-029-268-11 FLYWHEEL (R), INSERT (FX673) 77 X-3377-037-2 CHASSIS ASSY (F) (/M) (FX673)	51 X-3377-038-1 HOLDER (F) ASSY 53 3-046-789-01 SPRING (HDA) 67 3-388-079-01 BELT (F2) 68 3-040-897-01 SPRING (TGA), TORSION 69 3-029-268-21 FLYWHEEL (R), INSERT 77 X-3377-584-1 CHASSIS ASSY (FA) 83 3-033-757-01 SHEET (H)

• ELECTRICAL PARTS LIST

- Abbreviation

AUS : Australian model

CH : Chinese model

EA : Saudi Arabia model

EE : East European model

FR : French model

HK : Hong Kong model

KR : Korean model

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Page	WM-FX673				WM-FX675			
37	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
			MISCELLANEOUS				MISCELLANEOUS	
			*****				*****	
					27	1-694-502-11	CONDUCTIVE BOARD, CONNECTION	
					L5	1-754-046-11	ANTENNA, FERRITE-ROD	
					ND1	1-803-469-11	DISPLAY PANEL, LIQUID CRYSTAL	
					X2	1-577-262-11	VIBRATOR, CRYSTAL	

			ACCESSORIES & PACKING MATERIALS				ACCESSORIES & PACKING MATERIALS	
			*****				*****	
		1-418-019-11 REMOTE CONTROL UNIT (FX673)				A-3052-359-A REMOTE CONTROL ASSY (RM-WMF5)		
⚠		1-528-252-21 BATTERY CHARGER (BC-7S)						
		(FX673: UK, E, HK)						
		1-528-299-41 BATTERY, NI-CD (NC-6WM) (FX673: CND)						
⚠		1-528-434-13 BATTERY CHARGER (BC-7SG)						
		(FX673: AUS)						

– Continued on next page –

Page	WM-FX673	WM-FX675
38	1-528-543-11 BATTERY, NICKEL CADMIUM (NC-6WM) (FX673: E, EA, HK, AUS/FX877: CH)	1-528-299-41 BATTERY, NICKEL CADMIUM (NC-6WM) (AEP)
	1-528-543-22 BATTERY, NICKEL CADMIUM (NC-6WM) (FX673: AEP, UK, E, FR, EE, EA, HK, AUS /FX877)	1-528-543-11 BATTERY, NICKEL CADMIUM (NC-6WM) (E, AUS,CH)
	△ 1-528-713-21 BATTERY CHARGER (BC-7DC) (FX673: CND)	△ 1-528-661-11 BATTERY CHARGER (BC-7DR) (KR)
	△ 1-528-744-23 BATTERY CHARGER (BC-7DY) (FX673: AEP, FR, EE, EA)	△ 1-528-744-23 BATTERY CHARGER (BC-7DY) (AEP, EA)
	_____	△ 1-528-822-13 BATTERY CHARGER (BC-7DN) (E, CH)
	_____	1-756-114-11 CHARGER, BATTERY (BC-7SG2) (AUS)
	_____	1-756-115-11 CHARGER, BATTERY (BC-7SP2) (HK)
	1-759-213-11 CASE, BATTERY (FX673: CND, E, EA, HK, AUS/FX877)	△ 1-569-008-21 ADAPTOR, CONVERSION 2P (EA)
	1-759-700-21 CASE, BATTERY (FX673: AEP, UK, FR, EE)	1-759-213-31 CASE, BATTERY (for RM-WMF5) (E, AUS,CH)
	3-008-521-01 CASE, BATTERY CHARGE (FX673/FX877: CH, KR)	1-759-700-21 CASE, BATTERY (for RM-WMF5) (AEP)
	_____	3-008-521-01 CASE, BATTERY CHARGE
	3-029-488-01 POUCH, CARRYING	3-021-018-01 LABEL, FRANCE (FR)
	3-864-890-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH) (FX673: CND, AEP, UK, FR, EE, EA, AUS, CH)	3-222-163-01 POUCH, CARRYING
	3-864-890-21 MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (FX673: AEP, EE)	3-224-776-11 MANUAL, INSTRUCTION (ENGLISH, ARABIC) (E, CH)
	3-864-890-31 MANUAL, INSTRUCTION (GERMAN, ITALIAN) (FX673: AEP)	3-224-776-21 MANUAL, INSTRUCTION (ENGLISH, TRADITIONAL CHINESE) (HK, KR, AUS)
	3-864-890-41 MANUAL, INSTRUCTION (DUTCH, SWEDISH) (FX673: AEP)	3-224-776-31 MANUAL, INSTRUCTION (SIMPLIFIED CHINESE, KOREAN) (E, CH)
	3-864-890-51 MANUAL, INSTRUCTION (FINNISH) (FX673: AEP)	3-224-776-41 MANUAL, INSTRUCTION (ENGLISH, TRADITIONAL CHINESE) (E)
	3-864-890-61 MANUAL, INSTRUCTION (POLISH, RUSSIAN) (FX673: EE)	3-224-776-51 MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN) (AEP)
	3-864-890-71 MANUAL, INSTRUCTION (ENGLISH, CHINESE) (FX673: E, HK)	3-224-776-61 MANUAL, INSTRUCTION (SPANISH, ITALIAN, PORTUGUESE) (AEP)
	3-864-890-81 MANUAL, INSTRUCTION (ARABIC, CHINESE) (FX673: EA, CH)	3-224-776-71 MANUAL, INSTRUCTION (DUTCH, SWEDISH, FINNISH) (AEP)
	_____	3-224-776-81 MANUAL, INSTRUCTION (ENGLISH, POLISH, RUSSIAN) (EE)
		3-224-776-91 MANUAL, INSTRUCTION (CZECH, HUNGARIAN, SLOVAKIAN) (EE)

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.



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Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK $\triangle$ OR DOTTED LINE WITH MARK $\triangle$ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE $\triangle$ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 SERVICING NOTES

This set detects the rotation of the idler gear (A) (side S) using the PH1 (photo reflector). The PH1 is mounted on the MAIN board, therefore the idler gear (A) (side S) cannot be detected with the MAIN board removed. As a result, the motor (M601) cannot be controlled, causing malfunction.

Further, the DIRECTION switch (S1) is also mounted on the MAIN board, and with the board removed, the mechanism position cannot be detected and the operation is not changed over.

Therefore, when the voltage check is executed with the MAIN board removed, follow the procedure provided below.

1. Setting

- (1) Refer to "3. DISASSEMBLY", and remove the MAIN board.
- (2) Connect the MAIN board to the motor (M601) and the plunger (PM901) using jumper wires. These can be connected easily with the use of the extension tool (Part No. 1-769-143-11) (ten in one set).
- (3) Short the TAPE DETECT switch (S901-1) terminals and the ATS switch (S901-2) terminals.
- (4) Connect the AF oscillator to the Q15-1 (COLLECTOR) and the TP23 (GND).
- (5) Supply 1.3 V to the battery terminals using the regulated power supply.

2. Preset state

To set the PLAY, FF, REW modes, the preset state must be set.

- (1) Check that the slider (NR) and the DIRECTION switch (S1) are set to the center position. If not, set the preset state as follow.
- (2) Move the DIRECTION switch (S1) to the side, which the slider (NR) is facing.
- (3) The slider (NR) will move when the regulated power supply switch is set to OFF once and then set to ON. Move the DIRECTION switch (S1) according to this timing and set to the center position.

3. FF, REW modes

- (1) Check that the preset state is set.
- (2) Input the square wave or sine wave to the Q15-1 (COLLECTOR) and the TP23 (GND).
- (3) Press the **RADIO OFF** button (S3) to set the STOP mode.
- (4) Press the **FF AMS** button (S4) or the **REW AMS** button (S5).

4. PLAY mode

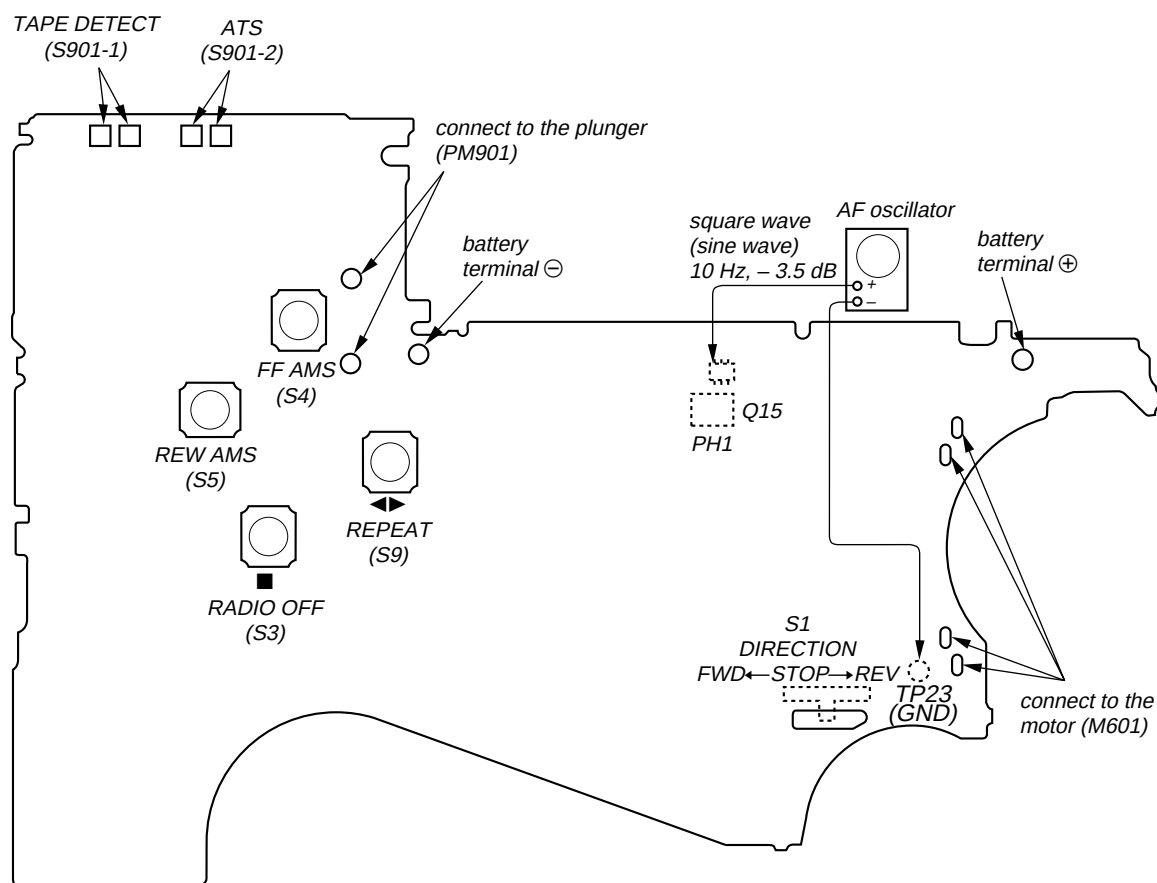
- (1) Check that the preset state is set.
- (2) Input the square wave or sine wave to the Q15-1 (COLLECTOR) and the TP23 (GND).
- (3) Press the **RADIO OFF** button (S3) to set the STOP mode.
- (4) Press the **REPEAT** button (S9) will move the slider (NR) once towards the side R and then to the side F. Move the DIRECTION switch (S1) according to this timing will set the PLAY mode (side F). Press the **REPEAT** button (S9) another time and move the DIRECTION switch (S1) according to the movement of the slider (NR) will set the PLAY (R mode).

Note 1: If the above fails, perform from preset again.

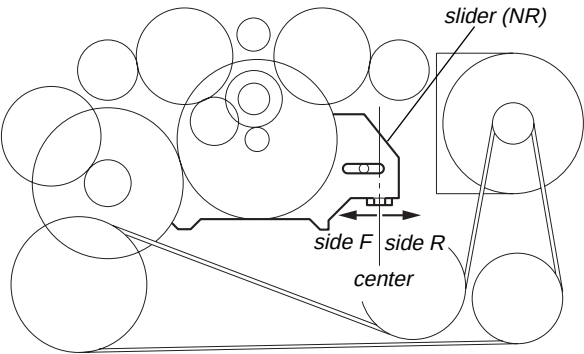
Note 2: Use the **REPEAT** (S9), **RADIO OFF** (S3), **FF AMS** (S4), and **REW AMS** (S5) buttons on the remote controller as much as possible. If no remote controller, do not touch the buttons with your hands, but using a stick with a round tip.

Note 3: When using headphones, the timing for move the DIRECTION switch (S1) can be determined from the beep sound.

– MAIN Board (side B) –

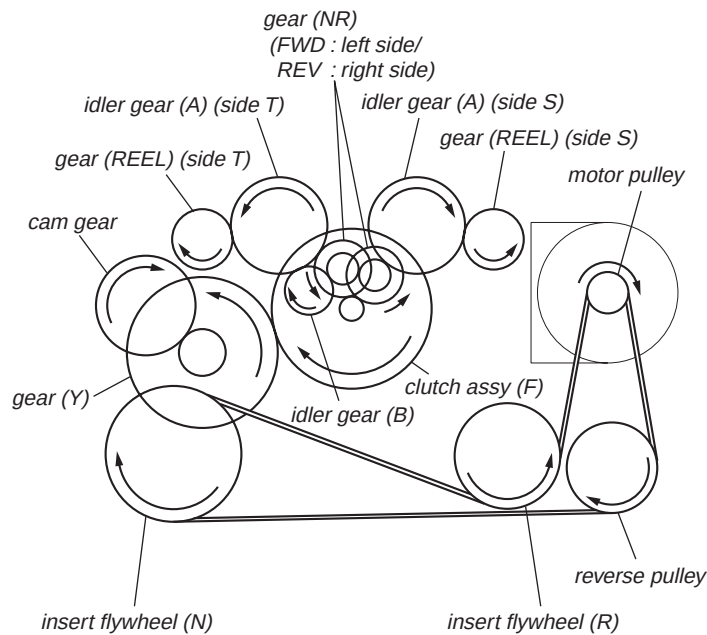


Slider (NR)

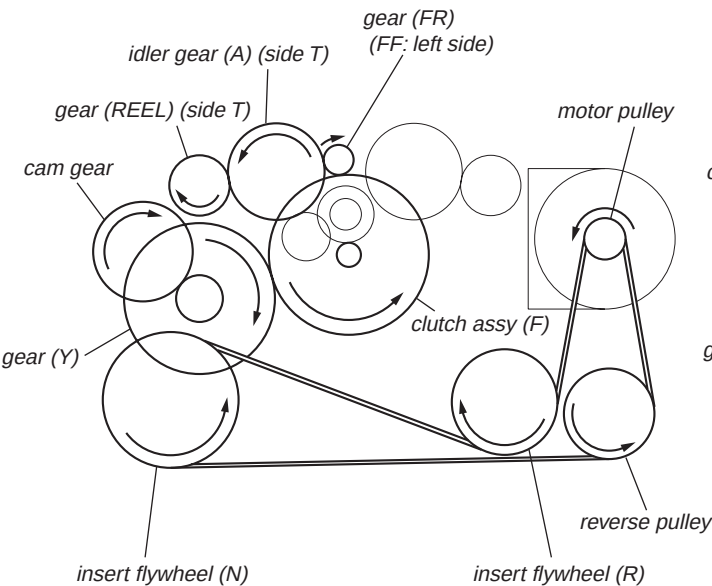


Rotation system

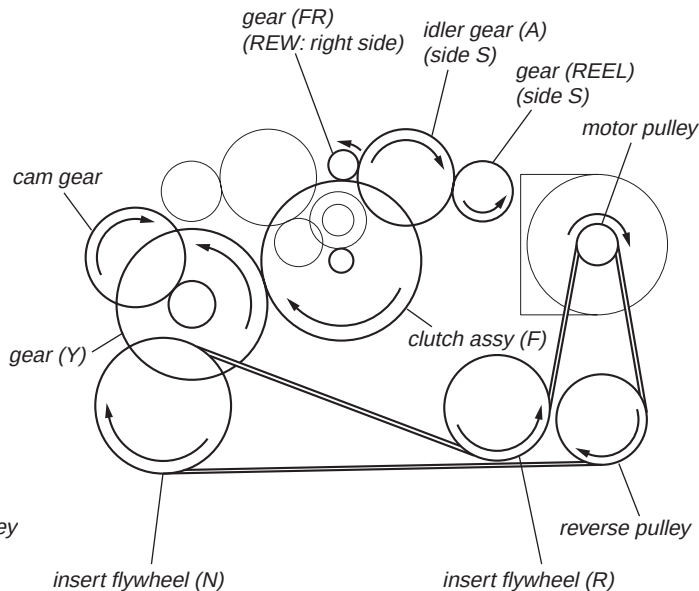
Rotation system during PLAY.



Rotation system during FF.



Rotation system during REW.

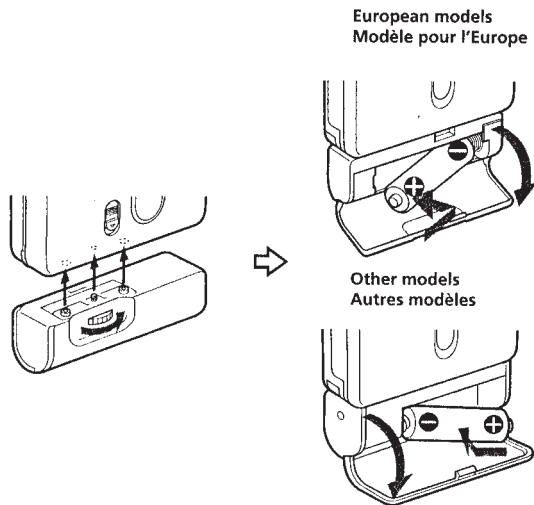


SECTION 2 GENERAL

This section is extracted from instruction manual.

A

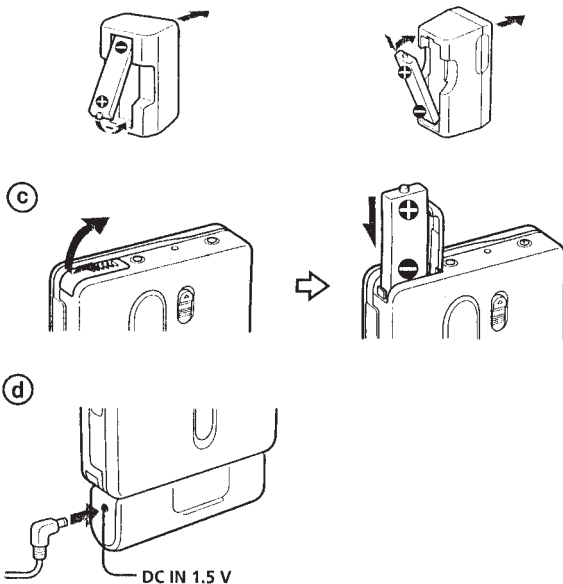
(a)



(b)

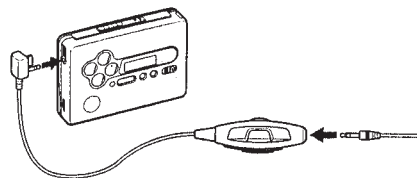
U.K., Australian, and Hong Kong
model
Modèle pour le Royaume-Uni,
l'Australie et Hong-Kong

Other models
Autres modèles



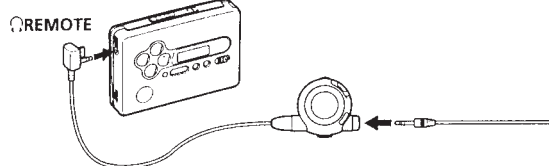
B

(FX673)



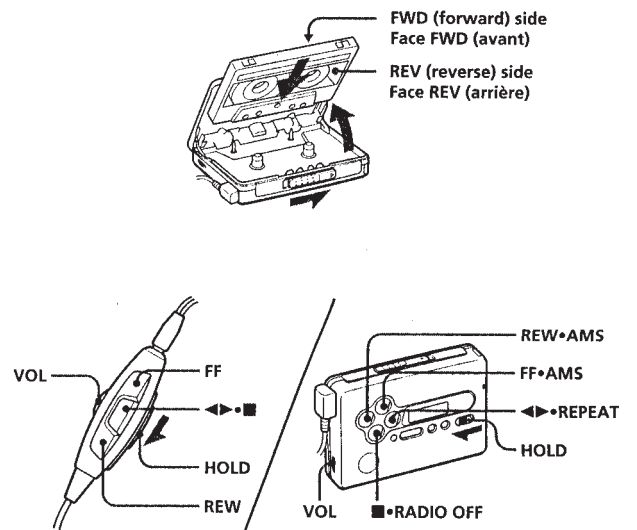
B

(FX877)



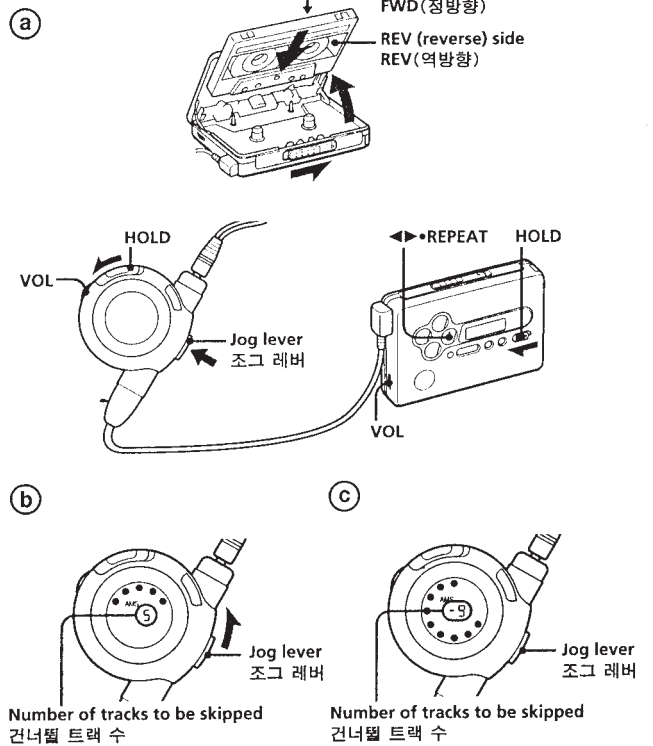
C

(FX673)

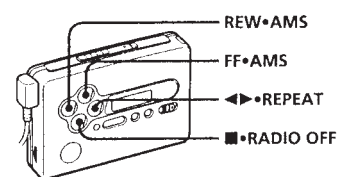


C

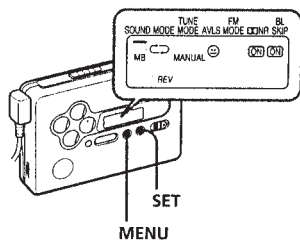
(FX877)



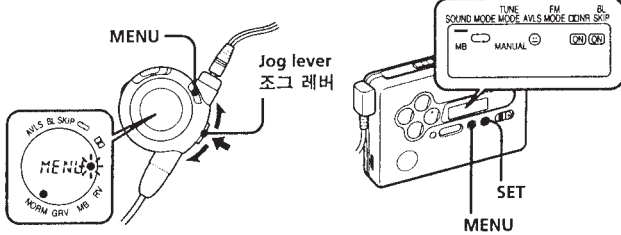
(d)



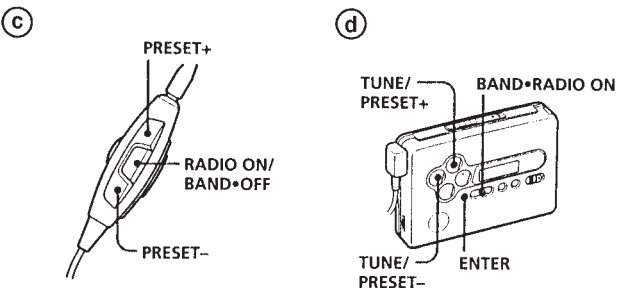
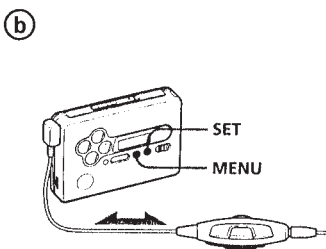
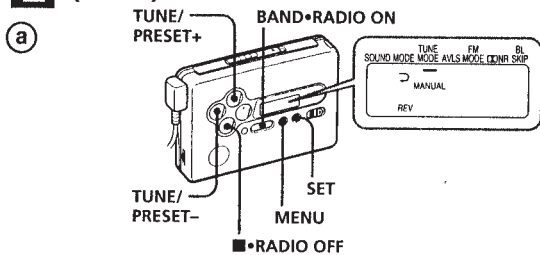
D (FX673)



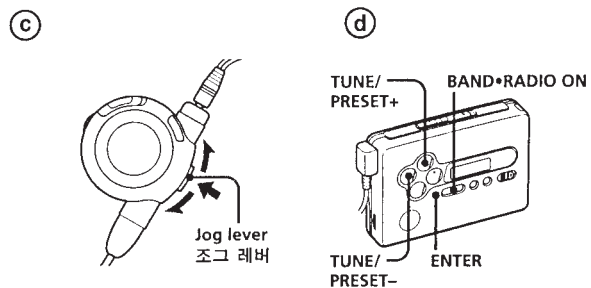
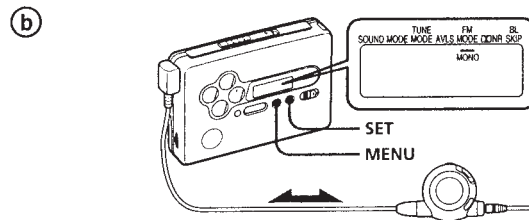
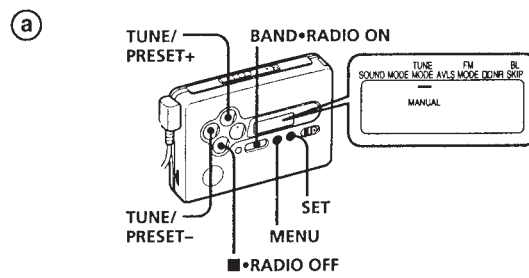
D (FX877)



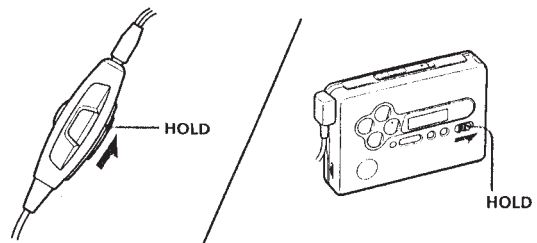
E (FX673)



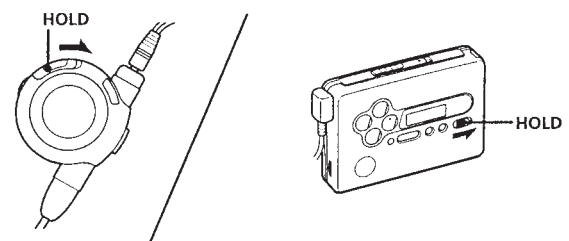
E (FX877)



F (FX673)

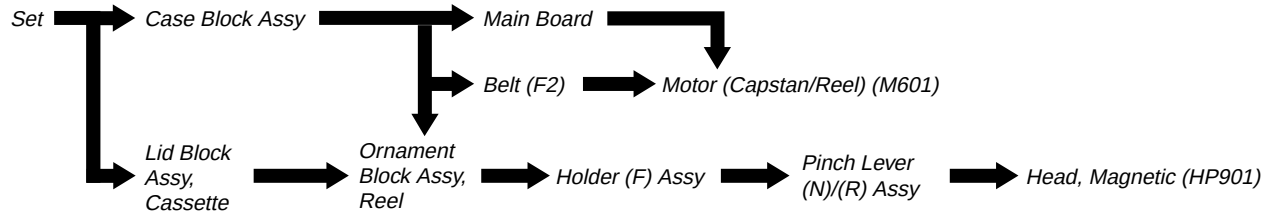


F (FX877)



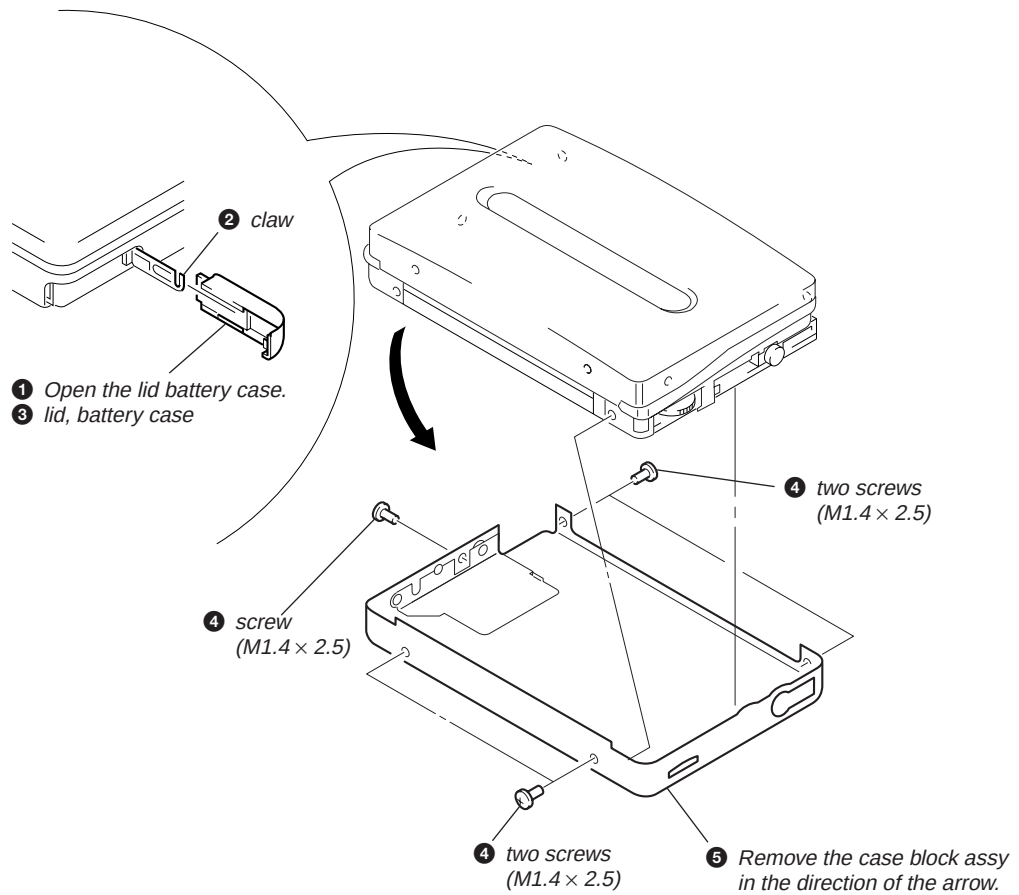
SECTION 3 DISASSEMBLY

This set can be disassembled in the order shown below.

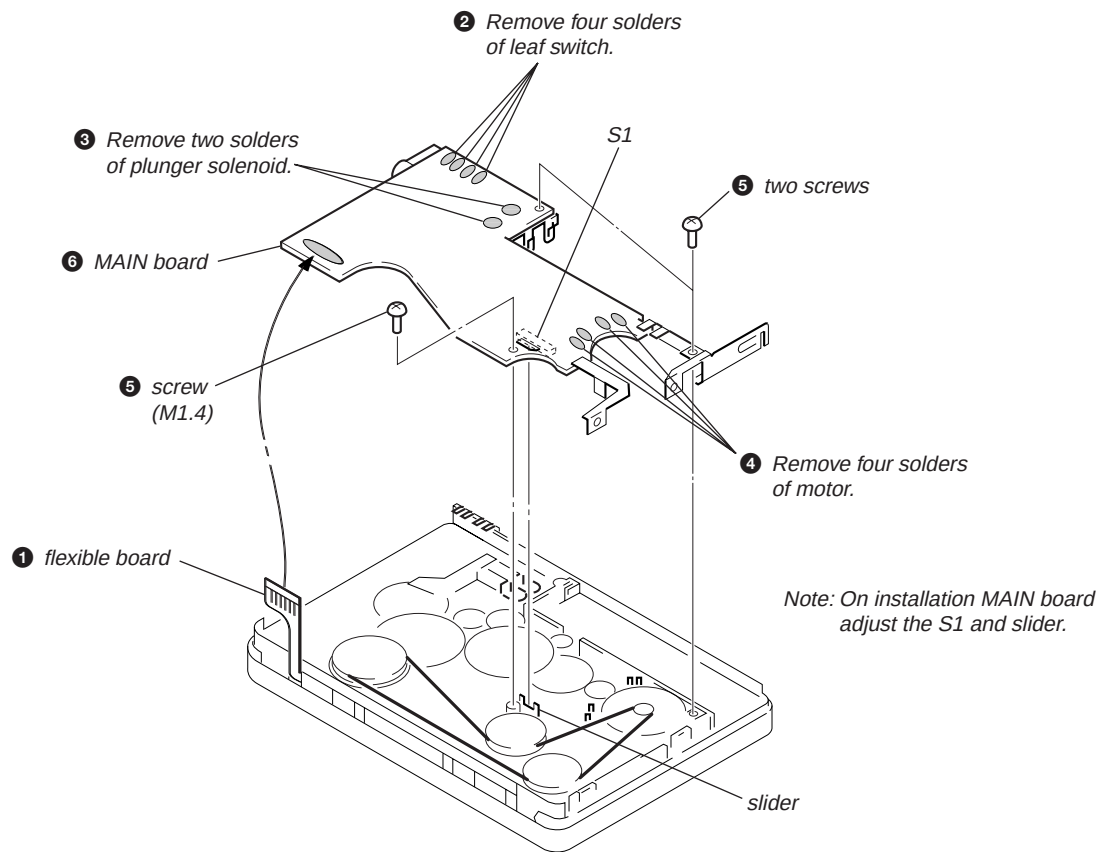


Note: Follow the disassembly procedure in the numerical order given.

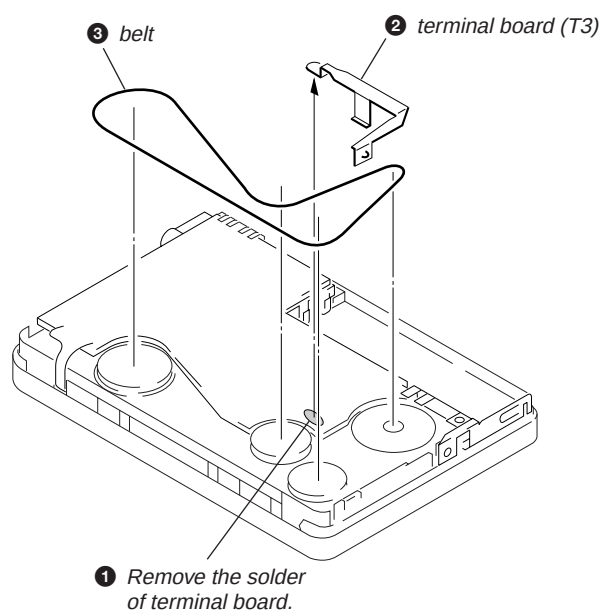
CASE BLOCK ASSY



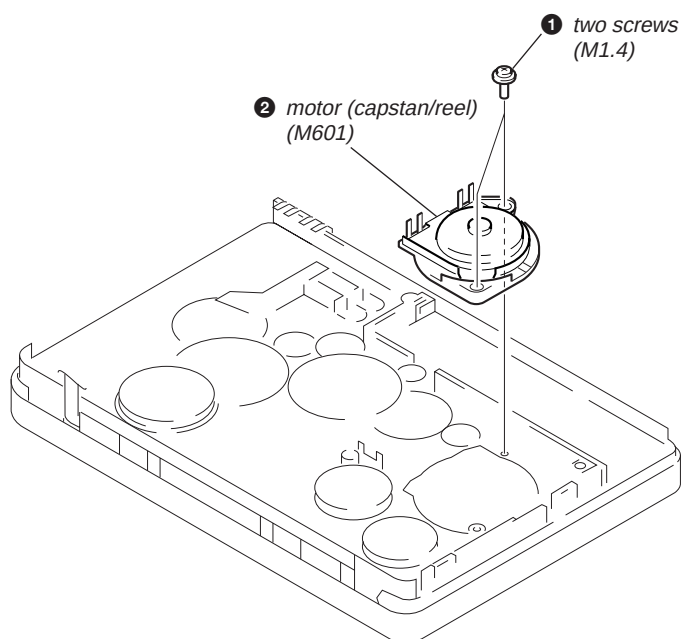
MAIN BOARD



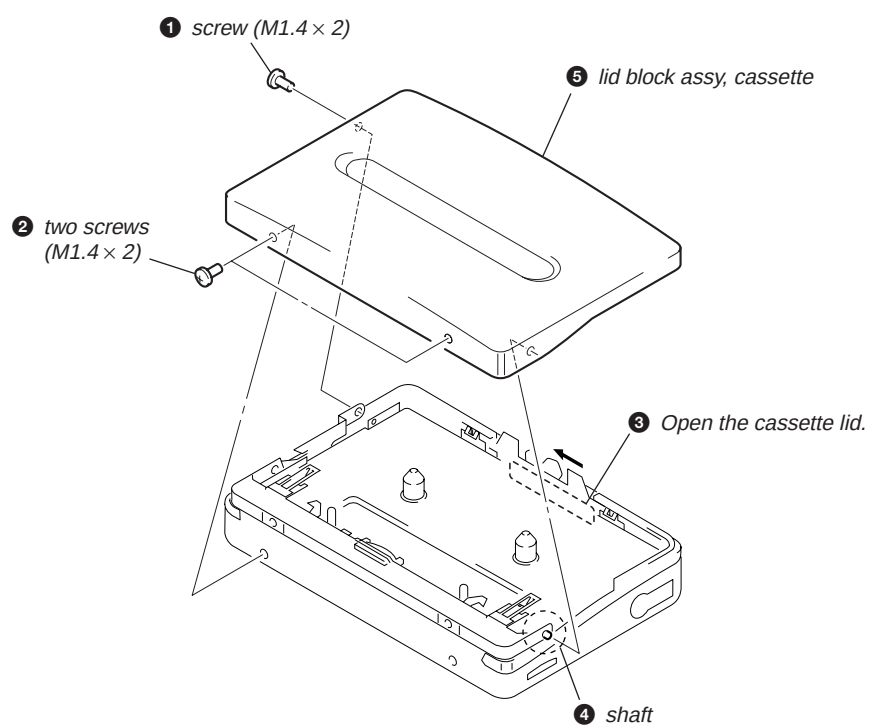
BELT (F2)



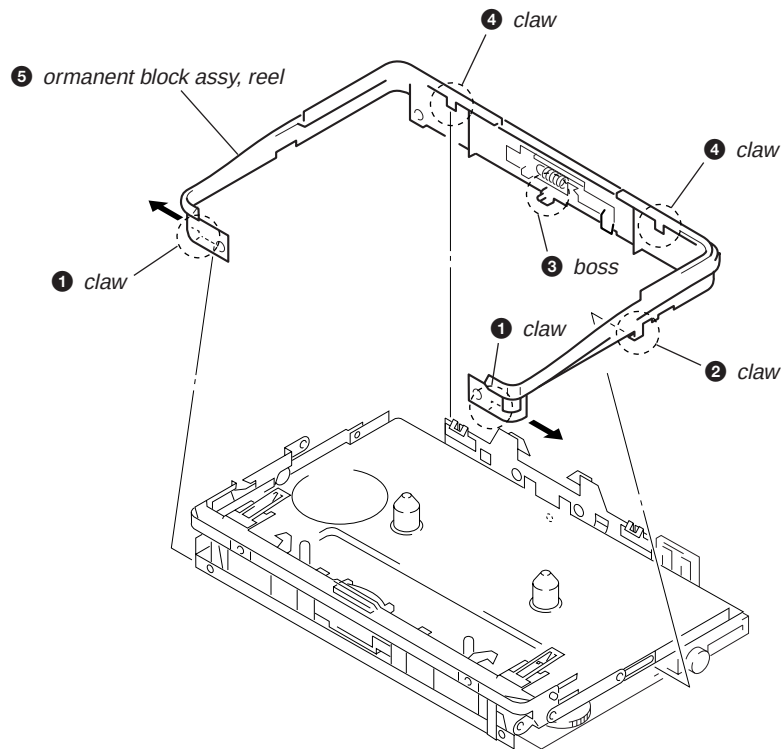
MOTOR (CAPSTAN/REEL) (M601)



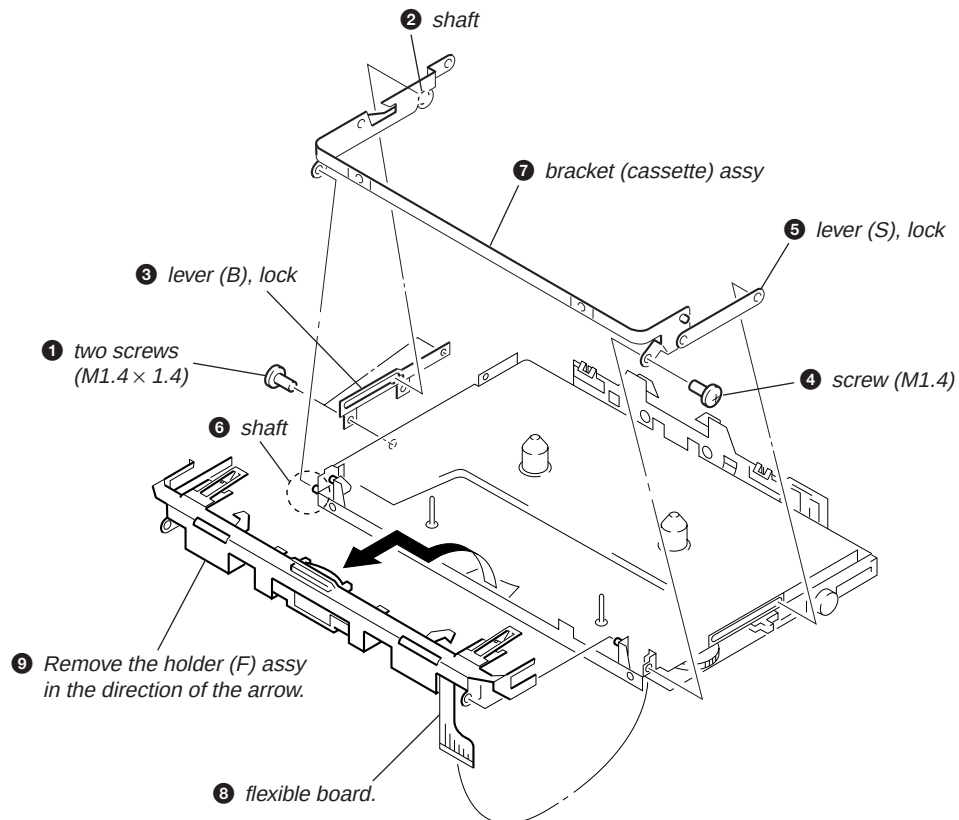
LID BLOCK ASSY, CASSETTE



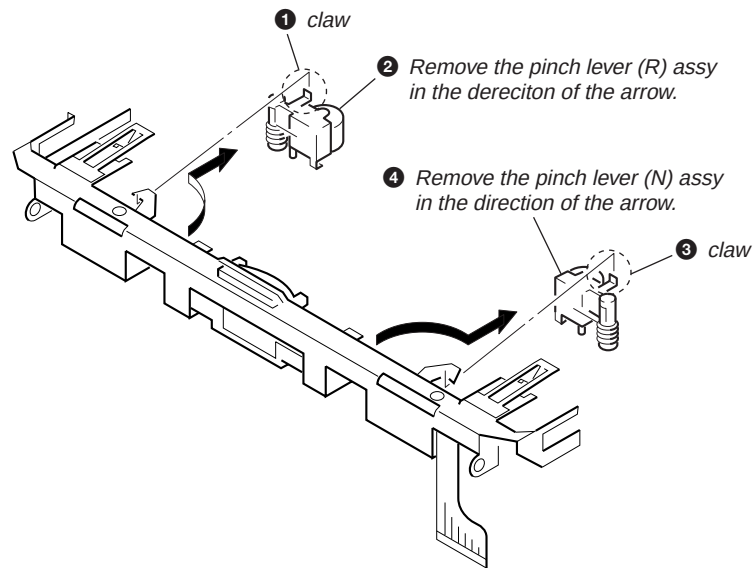
ORNAMENT BLOCK ASSY, REEL



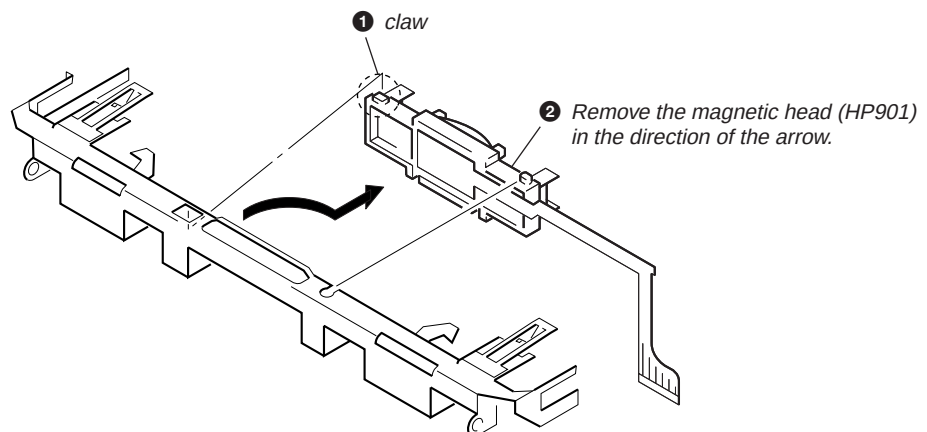
HOLDER (F) ASSY



PINCH LEVER (N)/(R) ASSY



HEAD, MAGNETIC (PLAY BACK) (HP901)



SECTION 4 MECHANICAL ADJUSTMENTS

PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:

playback head	pinch roller
rubber belts	capstan
- Demagnetize the playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage (1.3 V) unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	16 – 25 g•cm (0.23 – 0.34 oz•inch)
FWD Back Tension		0.5 – 1.5 g•cm (0.007 – 0.02 oz•inch)
REV	CQ-102RC	16 – 25 g•cm (0.23 – 0.34 oz•inch)
REV Back Tension		0.5 – 1.5 g•cm (0.007 – 0.02 oz•inch)
FF, REW	CQ-201B	more than 50 g•cm (more than 0.7 oz•inch)

SECTION 5 ELECTRICAL ADJUSTMENTS

PRECAUTION

- Specified voltage : 1.3 V (DC)
- Setting

BL SKIP	: OFF
SOUND RV/MB/GRV	: OFF
AVLS	: OFF
□□NR	: OFF

TAPE DECK SECTION

0 dB=0.775 V

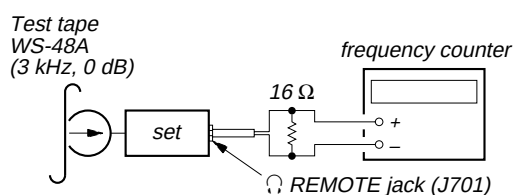
Test tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	Tape Speed Adjustment

Tape Speed Adjustment

Setting:

Function: TAPE



Procedure:

- Playback WS-48A (tape center) in the FWD state.
- Adjust RV601 so that the frequency counter reading becomes 3,000 Hz.

Specification Values: 2,970 to 3,030 Hz

- Playback WS-48A (tape center) in the REV state.
Check that the frequency counter reading is within 2% (approx. 60 Hz) of the reading of step 1.

Adjustment Location: MAIN BOARD (See page 13)

TUNER SECTION

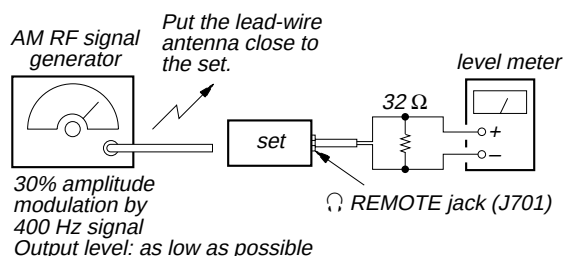
0 dB=1 μ V

[AM]

Setting:

function : RADIO

BAND button : AM

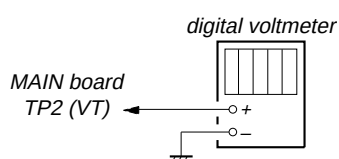
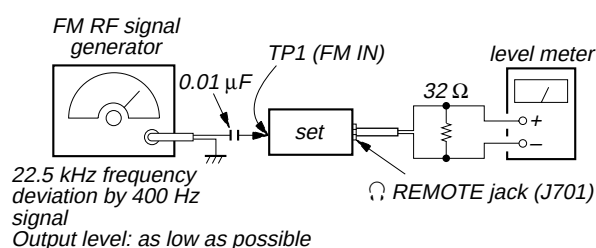


[FM]

Setting:

function : RADIO

BAND button : FM



- Repeat the procedures in each adjustment several times, and the tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT

Adjust for a maximum reading on level meter

T2	450 kHz
----	---------

AM VCO VOLTAGE ADJUSTMENT

Adjustment Part	Frequency Display	Reading on Digital Voltmeter
T1	531 kHz	1.5 $\pm$ 0.1 V
Confirmation	1602 kHz	8.5 $\pm$ 1 V

AM TRACKING ADJUSTMENT

Adjust for a maximum reading on level meter

L5	621 kHz
----	---------

FM VCO VOLTAGE ADJUSTMENT

Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L2	87.5 MHz	3.4 $\pm$ 0.1 V
Confirmation	108 MHz	Less than 10 V

FM VCO Adjustment

Setting:



Carrier frequency : 98 MHz

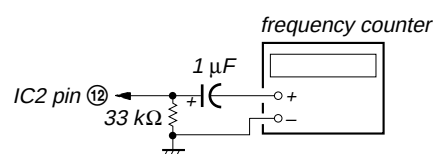
Modulation : no modulation

Output level : 0.1 V (100 dB)

Procedure:

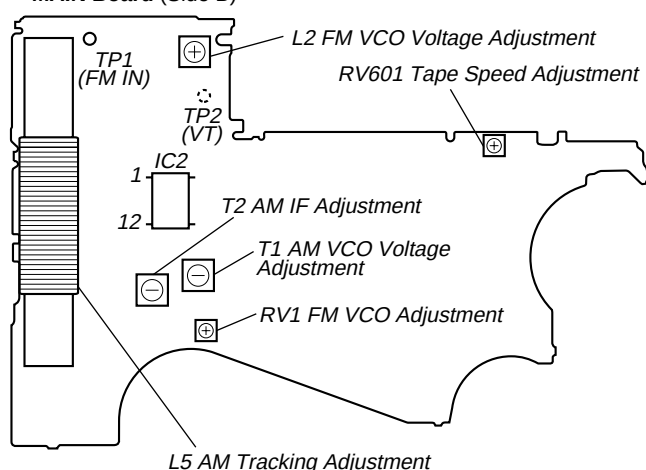
- Connect the frequency counter to pin ⑫ of IC2 as shown the figure below.
- Tune the set to 98 MHz.
- Adjust RV1 for 19 kHz reading on the frequency counter.

Specification: 18.95 kHz to 19.05 kHz



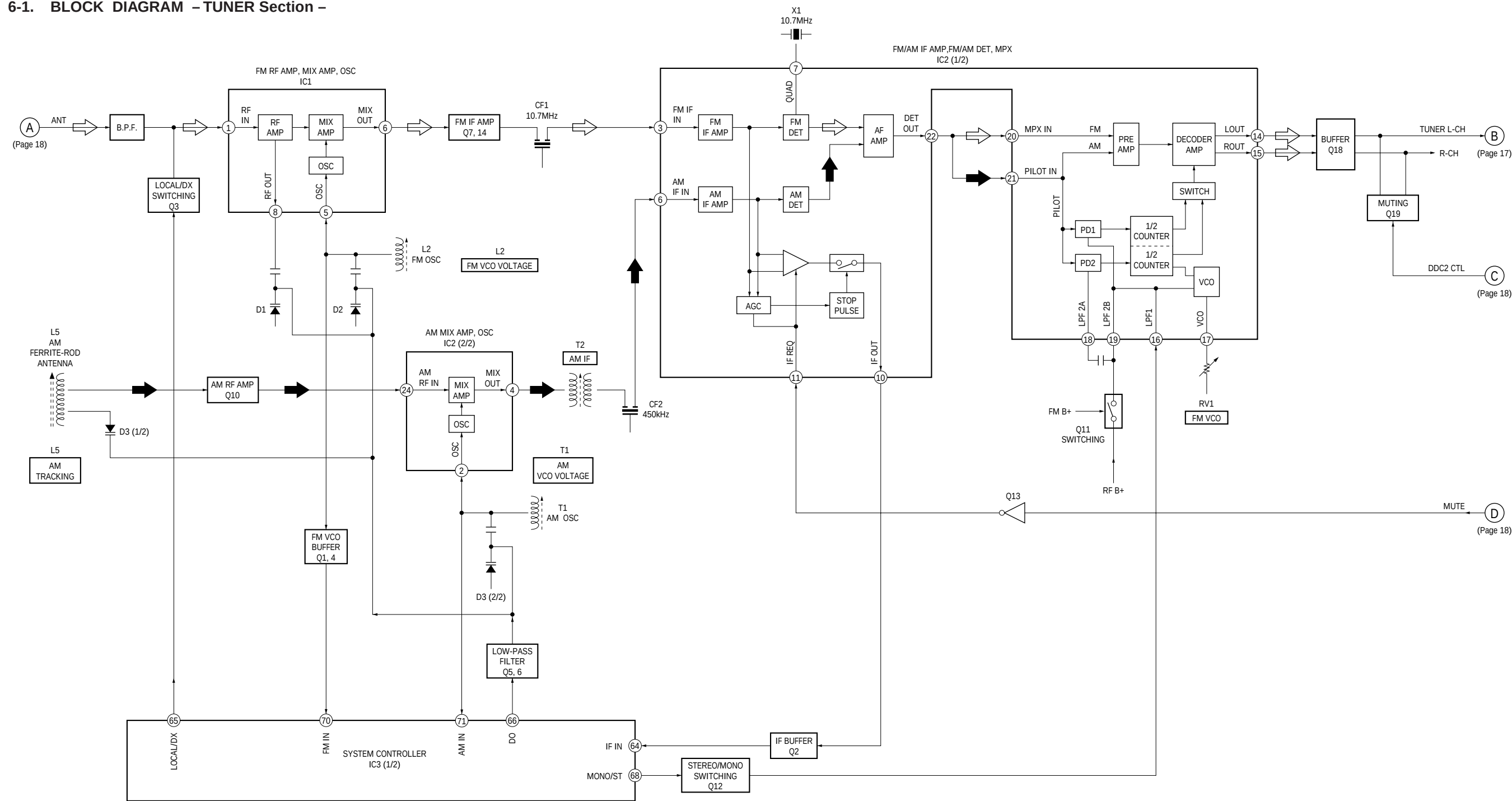
Adjustment Location:

- MAIN Board (Side B) -



SECTION 6 DIAGRAMS

6-1. BLOCK DIAGRAM – TUNER Section –



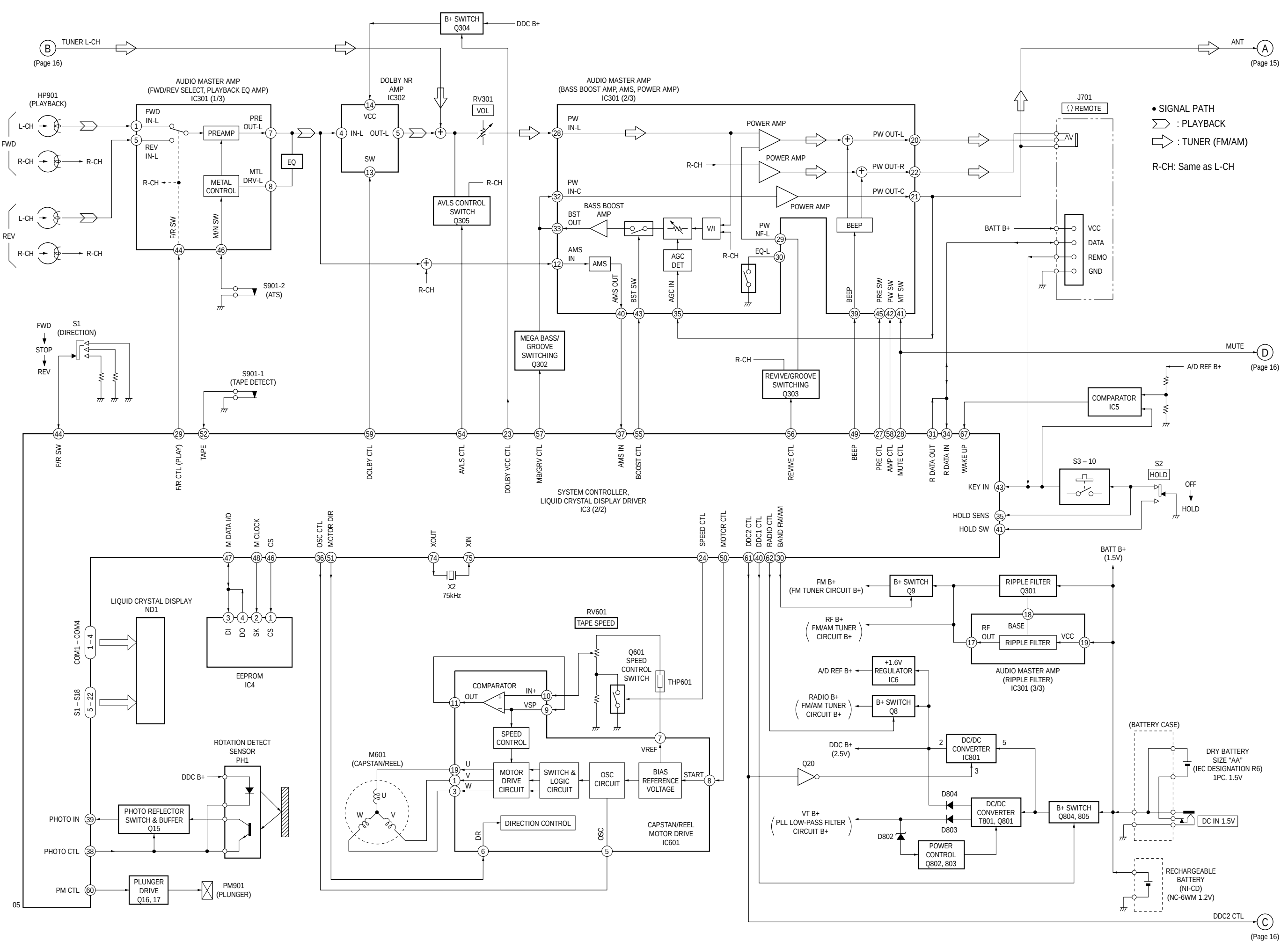
- SIGNAL PATH



 .15M
 .15M

R-CH: Same as L-CH

6-2. BLOCK DIAGRAM – MAIN Section –



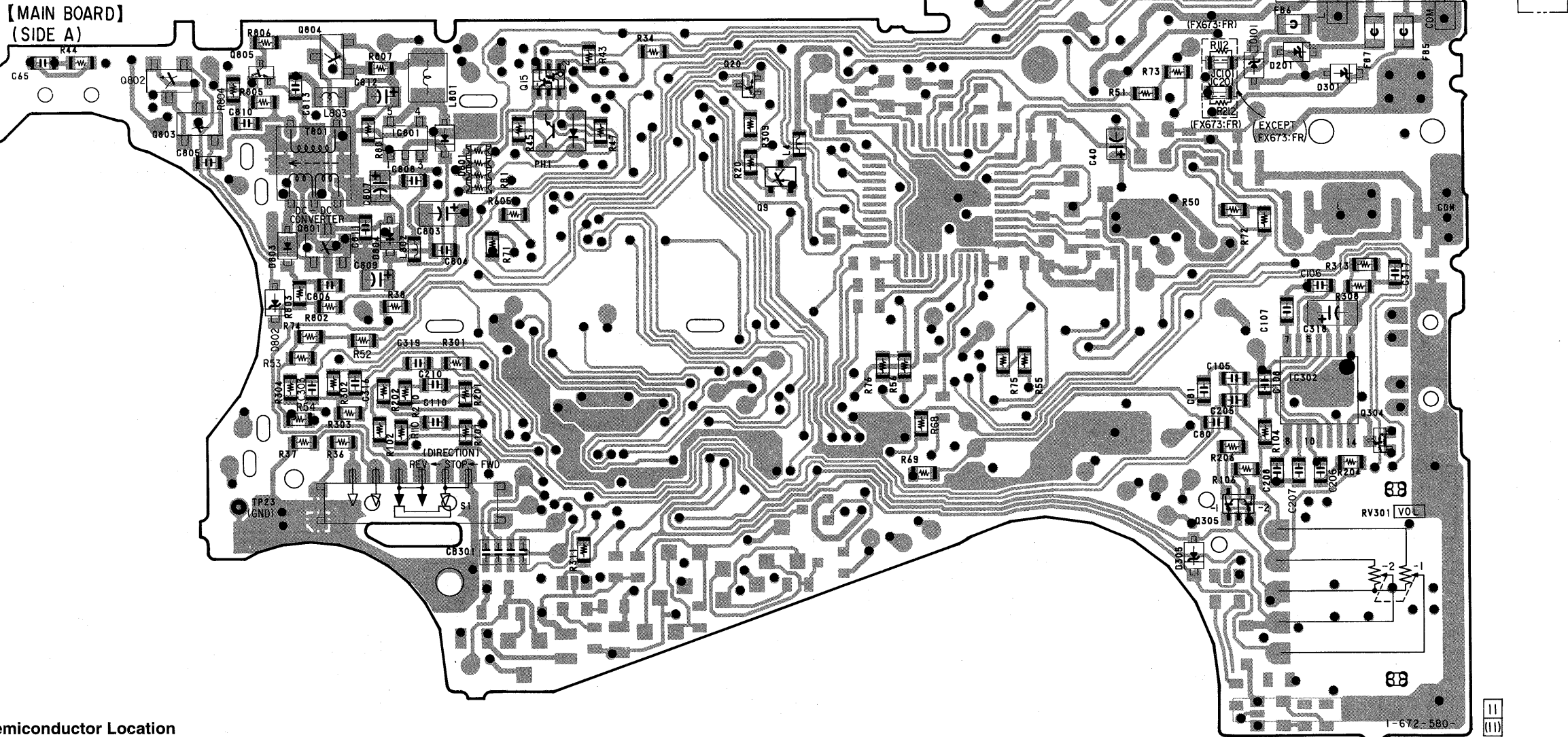
A

- ○ — : parts extracted from the component side.
- — : parts extracted from the conductor side.
- ● : Through hole.

- : Pattern from the side which enables seeing (The other layers' patterns are not indicated.)

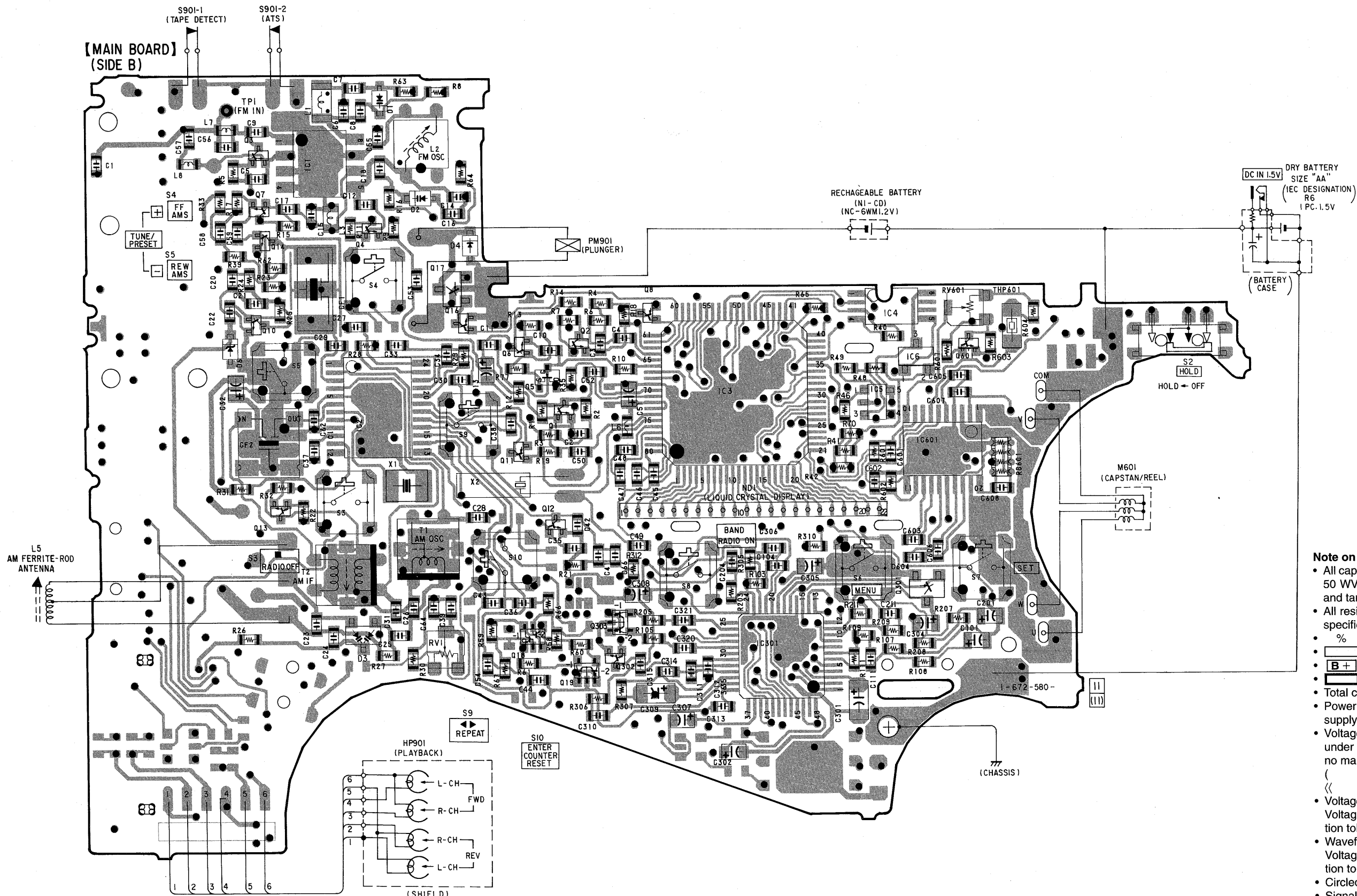
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

- This board is four-layer printed board. However, the patterns of layers 2 and 3 have not been included in the diagram.



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D1	B-15	D302	B-9	IC1	B-14	IC801	D-4	Q6	D-16	Q15	D-5	Q304	F-10
D2	B-15	D303	B-10	IC2	D-15			Q7	B-14	Q16	C-15	Q305	F-9
D3	F-15	D304	B-9	IC3	D-18	PH1	D-5	Q8	C-17	Q17	C-15	Q601	D-20
D4	C-15	D305	G-9	IC4	C-19			Q9	D-6	Q18	F-16	Q801	E-3
D5	B-8	D801	D-4	IC5	D-19	Q1	D-16	Q10	C-14	Q19	F-16	Q802	D-2
D6	D-13	D802	E-3	IC6	D-19	Q2	D-16	Q11	D-16	Q20	D-6	Q803	D-2
D101	C-9	D803	E-3	IC301	F-18	Q3	B-14	Q12	E-16	Q301	F-19	Q804	C-3
D201	C-9	D804	E-3	IC302	F-10	Q4	C-15	Q13	E-14	Q302	F-17	Q805	D-3
D301	D-10			IC601	D-19	Q5	D-16	Q14	C-14	Q303	F-17		



- All capacitors are in μF unless otherwise noted. pF; μpF
50 WV or less are not indicated except for electrolytics
and tantalums.

- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- % : indicates tolerance.
-  : panel designation.
-  : B+ Line.
-  : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 1.5 V and fed with regulated dc power supply from battery terminal.

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : PLAYBACK
- () : FM
- ⟨⟨ ⟩⟩ : AM

- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.

- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

- Circled numbers refer to waveforms.

- Signal path.

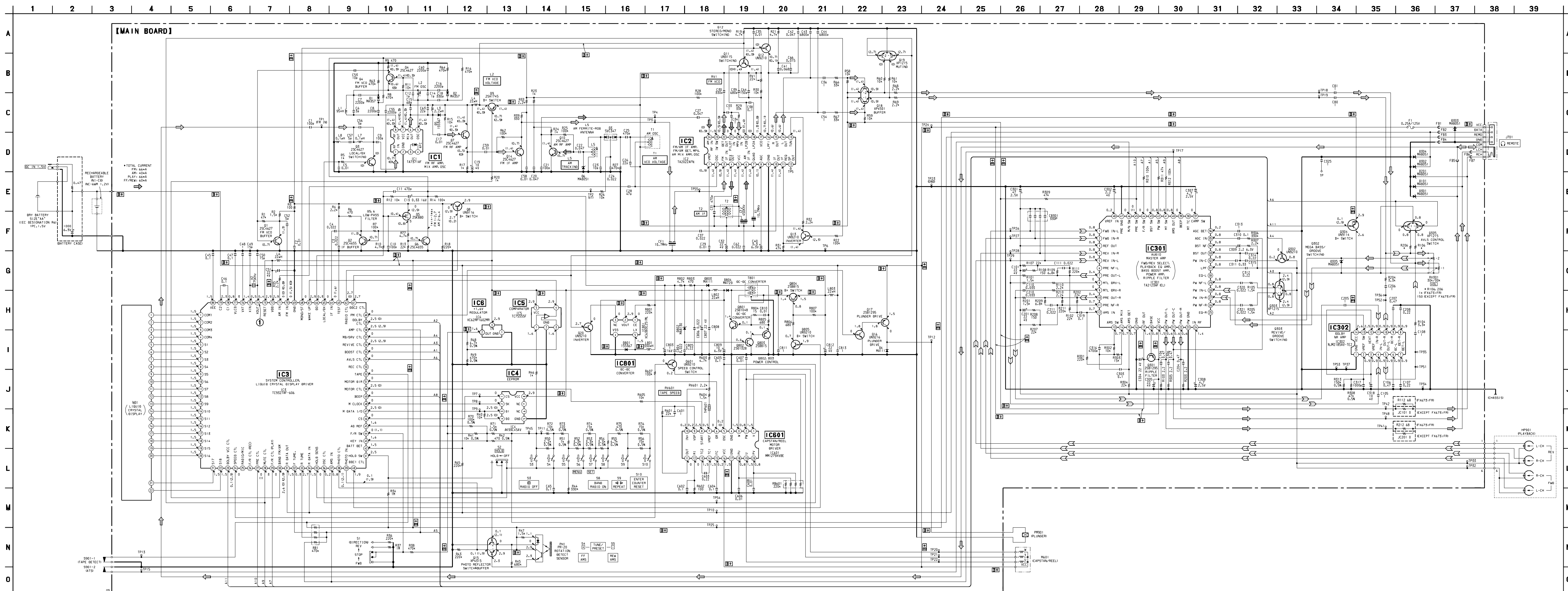
- ⇒ : FM

- ➡ : AM

- : PLAYBACK

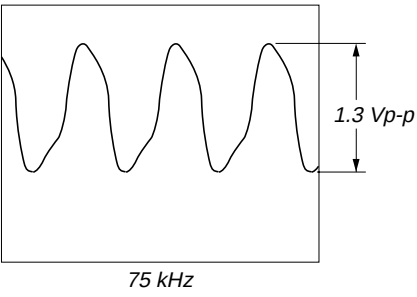
- Abbreviation

- FR : French mode



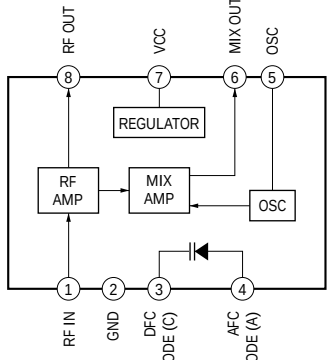
• Waveform
– MAIN BOARD –

❶ IC3 ③ (X OUT)
500 mV/DIV, 5 μs/DIV

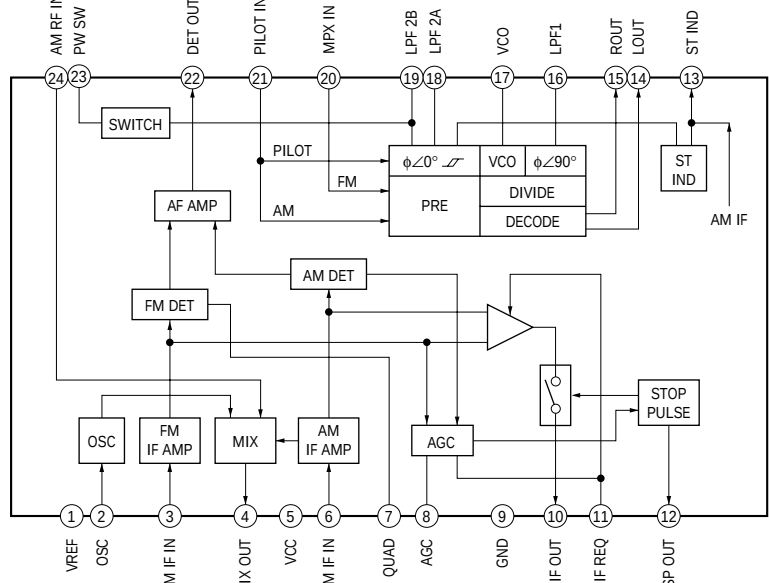


• IC Block Diagrams

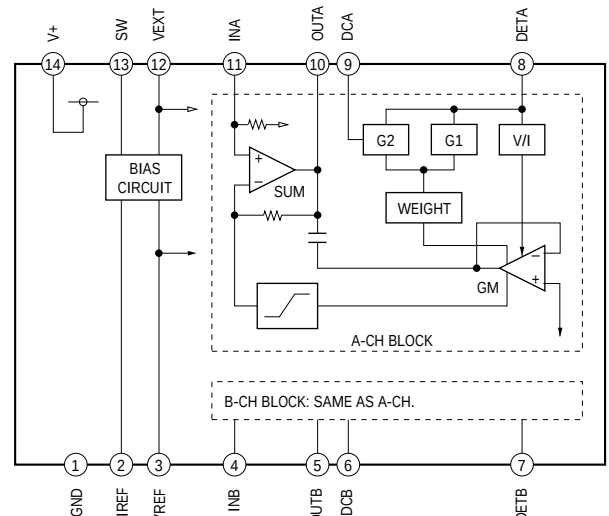
IC1 TA7371AF-EL



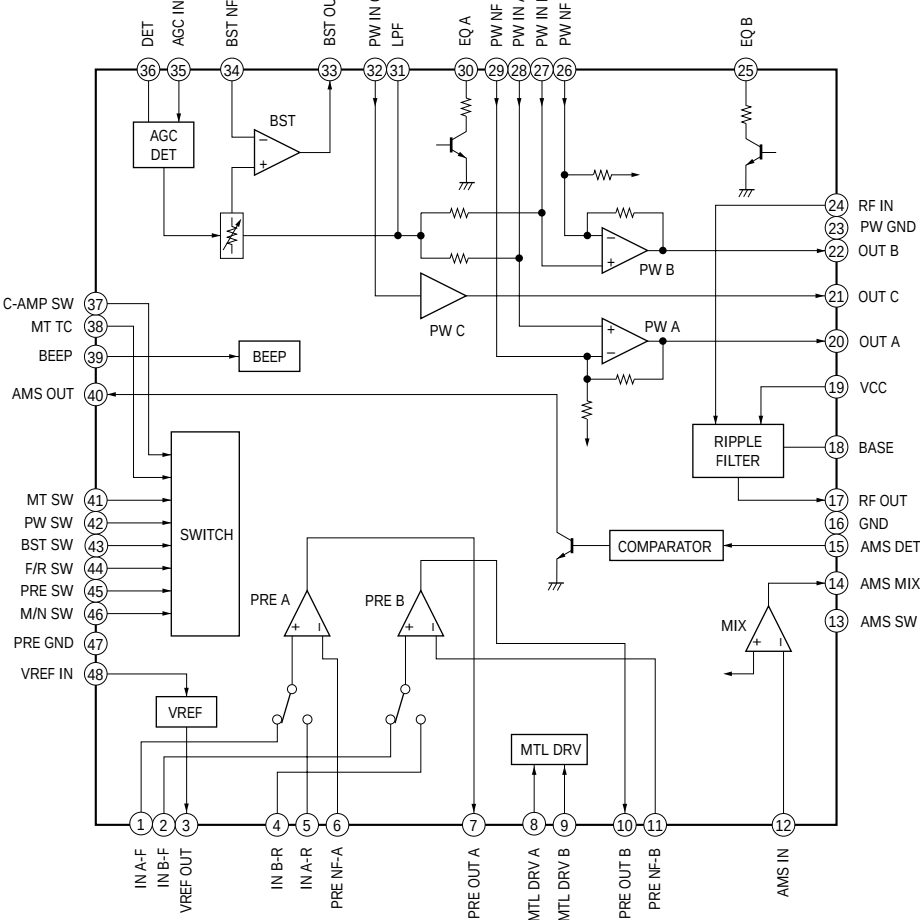
IC2 TA2022AFN-EL



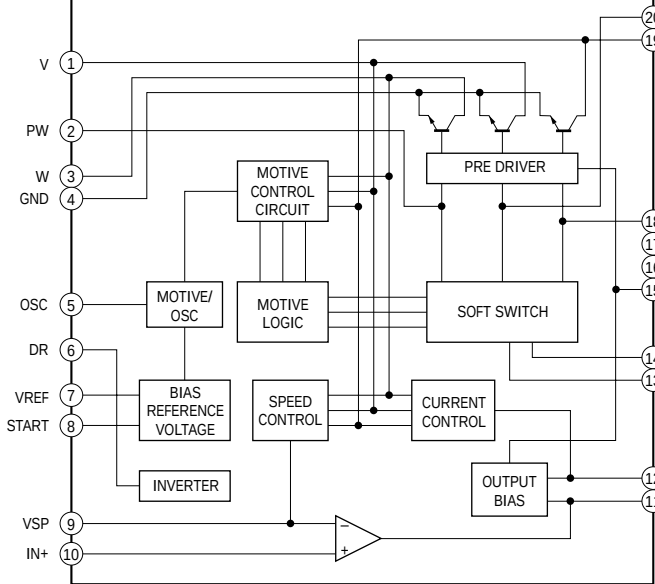
IC302 NJM2185AV-TE2



IC301 TA2123AF (EL)



IC601 MM1279XVBE



6-5. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC3 TC9327AF-606 (SYSTEM CONTROLLER, LIQUID CRYSTAL DISPLAY DRIVER)

Pin No.	Pin Name	I/O	Description
1 to 4	COM1 to COM4	O	Common drive signal output to the liquid crystal display (LCD1)
5 to 22	S1 to S18	O	Segment drive signal output to the liquid crystal display (LCD1)
23	DOLBY VCC CTL	O	Power on/off control signal output of the dolby NR amp (IC302) “L.”: power on, “H”: power off
24	SPEED CTL	O	Motor speed control signal output to the capstan/reel motor driver IC (IC601) “L.”: normal speed, “H”: 1/2 speed
25	RADIO/MIC	O	Not used (open)
26	F/R CTL (REC)	O	Not used (open)
27	PRE CTL	O	Preamp on/off control signal output to the TA2123AF (IC301) “L.”: tape play, “H”: radio on
28	MUTE CTL	O	Power on mute control signal output to the TA2123AF (IC301) “L.”: mute on
29	F/R CTL (PLAY)	O	Forward/reverse selection signal output to the TA2123AF (IC301) “L.”: reverse direction, “H”: forward direction
30	BAND FM/AM	O	Power on/off control signal output of the FM circuit “L.”: power on (FM on), “H”: power off (AM or tape on)
31	R DATA OUT	O	Remote control data output to the remote commander
32	F TUNE	I	“H” is input when amplifier on mode
33	R TUNE	I	“H” is input when amplifier on mode
34	R DATA IN	I	Communication request input from the remote commander
35	HOLD SENS	I	Hold status input of the HOLD switch (S2) “L.”: hold off, “H”: hold on “H” is input when key pressing at hold mode
36	OSC CTL	O	Motor restart control signal output to the capstan/reel motor driver IC (IC601) “L.”: BL skip status, “H”: FF/REW motor rotation status
37	AMS IN	I	Whether a music is present or not from TA2123AF (IC301) is detected at auto music sensor “L.”: music is present, “H”: music is not present
38	PHOTO CTL	O	Control signal output to the capstan/reel motor rotation detect circuit “L.”: rotation detect circuit on
39	PHOTO IN	I	Rotation detect signal input of the capstan/reel motor (M601)
40	DDC1 CTL	O	Power on/off control signal output of the DC/DC converter circuit “L.”: power off, “H”: power on
41	HOLD SW	I	Hold detect input from the HOLD switch (S2) “L.”: hold on
42	BATT DET	I	Battery voltage detection signal input (A/D input)
43	KEY IN	I	Key input terminal (A/D input)
44	F/R SW	I	Tape direction switch (S1) input terminal (A/D input) “L.”: forward position
45	A/D REF	I	Reference voltage (+1.6V) input for the A/D converter
46	CS	O	Chip select signal output to the EEPROM (IC4)
47	M DATA I/O	I/O	Two-way data bus with the EEPROM (IC4)
48	M CLOCK	O	Serial clock signal output to the EEPROM (IC4)
49	BEEP	O	Beep sound signal output to the TA2123AF (IC301)
50	MOTOR CTL	O	Motor start control signal output to the capstan/reel motor driver IC (IC601) “L.”: motor off, “H”: motor on
51	MOTOR DIR	O	Motor direction control signal output to the capstan/reel motor driver IC (IC601) “L.”: clockwise, “H”: counterclockwise
52	TAPE	I	Cassette tape detect switch (S901-1) input terminal “L.”: cassette detected, “H”: no cassette
53	REC CTL	O	Not used (open)
54	AVLS CTL	O	AVLS (Automatic Volume Limiter System) on/off control signal output terminal “L.”: AVLS on “H”: AVLS off

Pin No.	Pin Name	I/O	Description
55	BOOST CTL	O	Bass boost control signal output to the TA2123AF (IC301) “L”: off, “H”: on
56	REVIVE CTL	O	Emphasizing sound control signal output to the TA2123AF (IC301) “L”: RV (revive), “H”: normal/MB (mega bass)/GRV (groove)
57	MB/GRV CTL	O	Emphasizing sound control signal output to the TA2123AF (IC301) “L”: normal/RV (revive)/GRV (groove), “H”: MB (mega bass)
58	AMP CTL	O	Power on/off control signal output to the TA2123AF (IC301) “L”: power off, “H”: power on
59	DOLBY CTL	O	Dolby on/off control signal output to the dolby NR amp (IC302) “L”: dolby NR on, “H”: dolby NR off
60	PM CTL	O	Plunger drive signal output terminal “L”: plunger on
61	DDC2 CTL	O	Power on/off control signal output of the DC/DC converter circuit “L”: power off, “H”: power on
62	RADIO CTL	O	Power on/off control signal output of the FM and AM circuit “L”: power on (FM or AM on), “H”: power off (tape on)
63	TEST	I	Test input terminal Normally: fixed at “L”
64	IF IN	I	Intermediate frequency detect signal input from the TA2022AFN (IC2)
65	LOCAL/DX	O	Local/DX select signal output terminal “L”: DX, “H”: local
66	DO	O	PLL error signal output terminal
67	WAKE UP	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function in the power off status On at input of “H”
68	MONO/ST	O	FM stereo/mono select signal output to the TA2022AFN (IC2) “L”: stereo, “H”: mono
69	GND	—	Ground terminal
70	FM IN	I	FM VCO input terminal
71	AM IN	I	AM (MW) VCO input terminal
72	VDD	—	Power supply terminal (+2.5V)
73	RESET	I	System reset signal input terminal “L”: reset
74	XOUT	O	System clock output terminal (75 kHz)
75	XIN	I	System clock input terminal (75 kHz)
76	VXT	—	Terminal to which external capacitor is connected to stabilize crystal oscillator power supply
77	VLCD	—	Terminal for doubler circuit capacitor connection to develop liquid crystal display drive voltage
78	C1	—	
79	C2	—	
80	VEE	—	

SECTION 7

EXPLODED VIEWS

NOTE:

- XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)

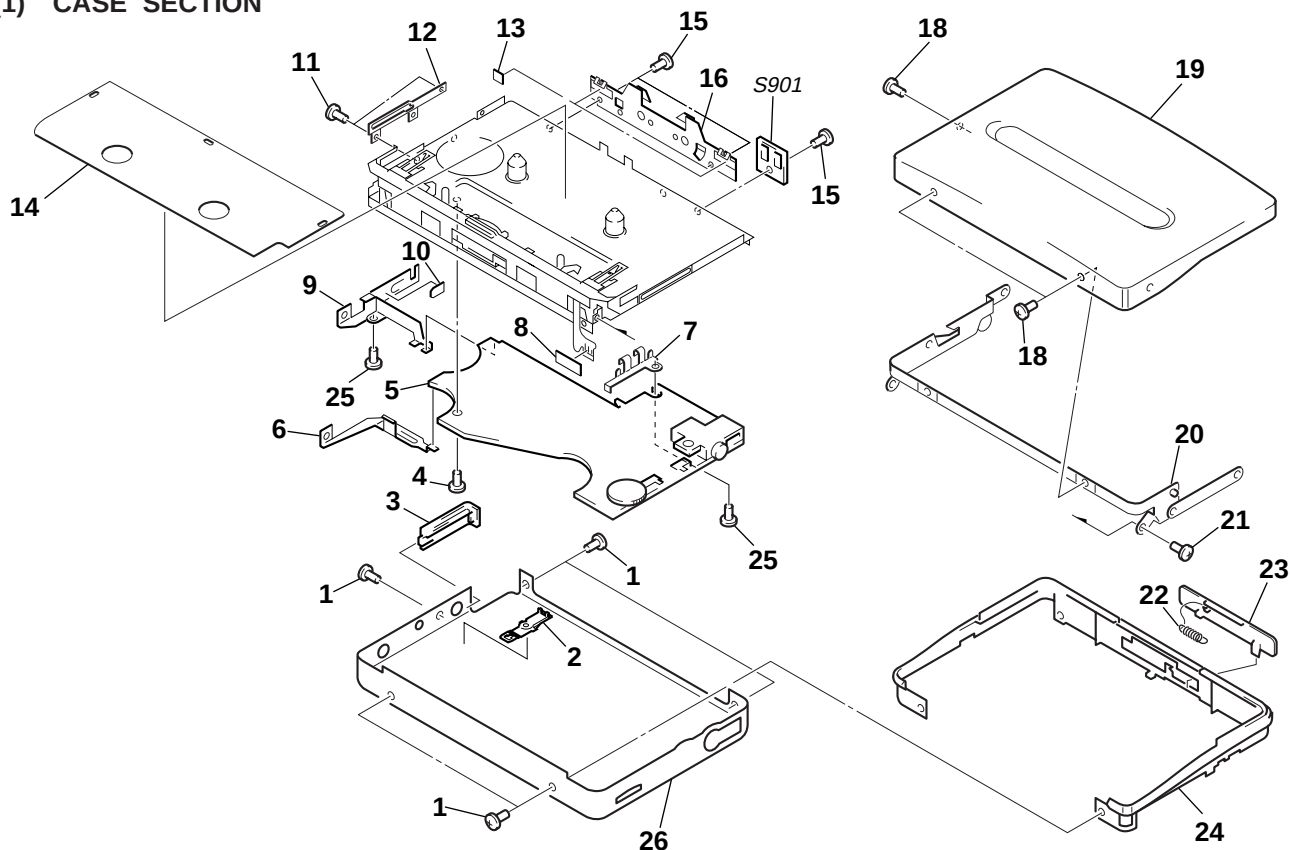
↑
Parts Color

↑
Cabinet's Color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

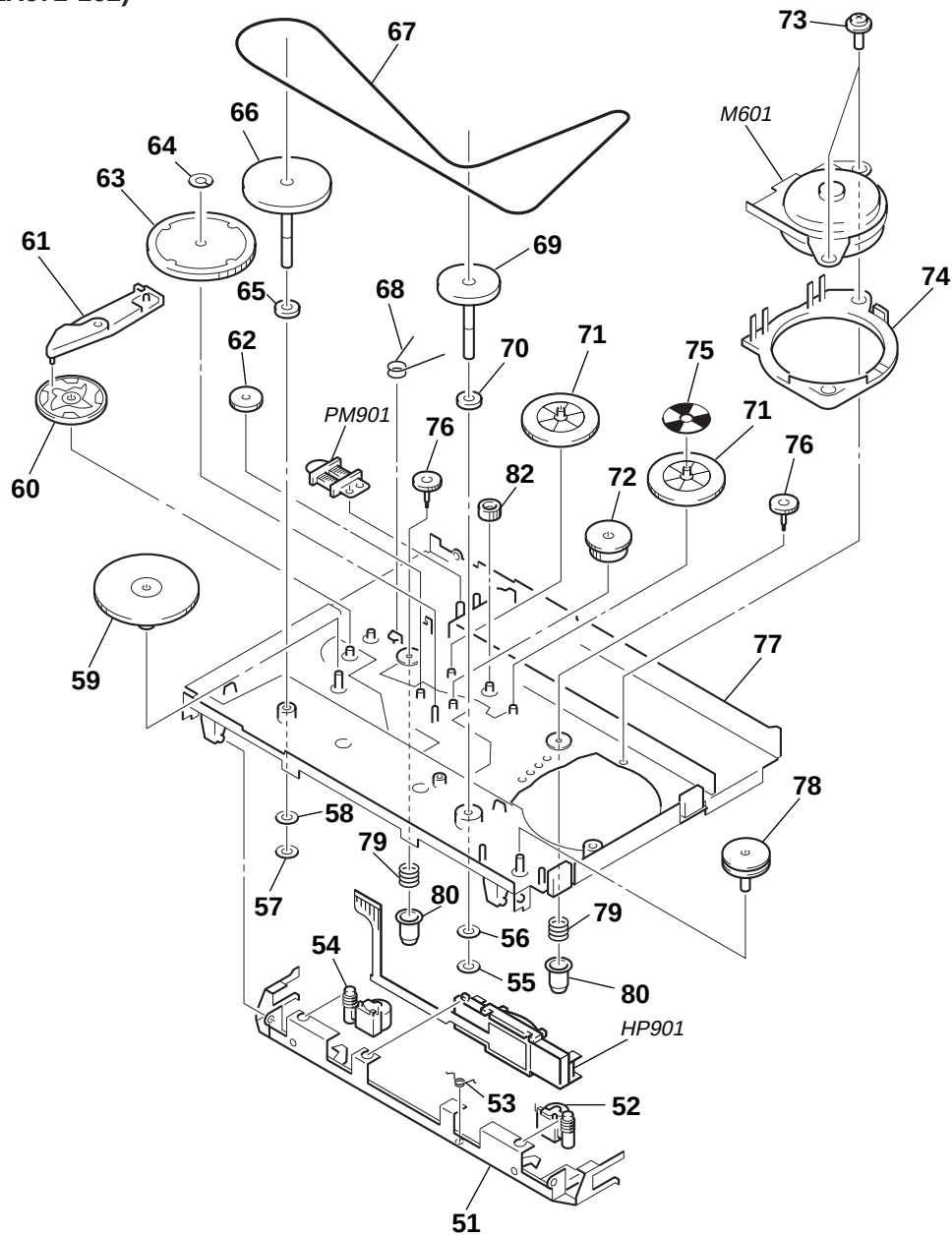
- Abbreviation
 - AUS : Australian model
 - CH : Chinese model
 - CND: Canadian model
 - EA : Saudi Arabia model
 - EE : East European model
 - FR : French model
 - HK : Hong Kong model
 - JE : Tourist model
 - KR : Korean model

(1) CASE SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-704-197-21	SCREW (M1.4X2.5), LOCKING (FX877: JE, KR)		15	3-366-892-01	SCREW (M1.4)	
1	3-704-197-23	SCREW (M1.4X2.5), LOCKING		16	X-3376-277-2	BRACKET ASSY	
2	3-034-075-01	LEVER (HOLD)		18	3-704-197-11	SCREW (M1.4X2.0), LOCKING (FX877: KR, JE)	
3	3-034-068-01	LID, BATTERY (FX877: JE) (SILVER)		18	3-704-197-13	SCREW (M1.4X2.0), LOCKING	
3	3-034-068-11	LID, BATTERY (FX877: JE) (BLUE)		19	X-3377-332-1	LID ASSY (F-S), CASSETTE (FX673/FX877: CH)	
3	3-034-068-21	LID, BATTERY (FX673/FX877: CH, KR)		19	X-3377-528-1	LID ASSY (F-SJ), CASSETTE	
3	3-034-068-31	LID, BATTERY (FX877: KR) (BLUE)				(FX877: JE, KR) (SILVER)	
4	3-345-648-71	SCREW (M1.4), TOOTHED LOCK		19	X-3377-529-1	LID ASSY (F-LJ), CASSETTE (FX877: KR, JE)	
5	A-3021-222-A	MAIN, BOARD COMPLETE				(BLUE)	
		(EXCEPT FX673: FR/FX877: JE)		20	X-3376-279-1	BRACKET (CASSETTE) ASSY	
5	A-3021-223-A	MAIN, BOARD COMPLETE (FX673: FR)		21	3-365-630-41	SCREW (M1.4)	
				22	3-029-220-01	SPRING, TENSION	
5	A-3021-237-A	MAIN, BOARD COMPLETE (FX877: JE)					
6	3-029-213-02	TERMINAL BOARD (T3)		23	3-029-219-01	KNOB (OPEN)	
7	3-029-210-01	TERMINAL BOARD (MINUS)		24	3-034-072-11	ORNAMENT, REEL	
8	3-309-595-11	SHEET, INSULATING, PACK (FX877: CH, JE)		25	3-375-114-41	SCREW	
9	X-3377-281-1	TERMINAL BOARD ASSY, BATTERY		26	X-3377-347-1	CASE (FX-AS3) ASSY	
						(FX673: CND, E, EA, HK, AUS)	
10	3-031-460-01	SHEET (BT)		26	X-3377-348-1	CASE (FX-AS7M) ASSY (FX877: KR)	
11	3-366-892-11	SCREW (M1.4X1.4)					
12	3-029-217-01	LEVER (B), LOCK		26	X-3377-349-1	CASE (FX-AS7M) ASSY (FX877: CH)	
13	3-328-483-11	SHEET		26	X-3377-357-1	CASE (FX-AS30) ASSY	
14	3-029-205-01	COVER, MD (FX877: JE)				(FX673: AEP, UK, FR, EE)	
				26	X-3377-366-1	CASE (FX-AL7J) ASSY (FX877: KR, JE) (BLUE)	
14	3-029-205-11	COVER, MD (FX673: AEP, UK, FR, EE)		26	X-3377-367-1	CASE (FX-AS7J) ASSY (FX877: KR, JE)	
14	3-029-205-21	COVER, MD				(SILVER)	
		(FX673: CND, E, EA, HK, AUS/FX877: CH)		S901	1-762-553-11	SWITCH, LEAF (TAPE DETECT, ATS)	

(2) MECHANISM DECK SECTION
(MT-WMEX672-162)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3376-293-1	HOLDER (F) ASSY (FX877)		68	3-029-287-01	SPRING (TG), TORSION	
51	X-3377-039-1	HOLDER (F) ASSY (M) (FX673)		69	3-029-268-01	FLYWHEEL (R), INSERT (FX877)	
52	X-3377-363-1	PINCH LEVER (R) ASSY		69	3-029-268-11	FLYWHEEL (R), INSERT (FX673)	
53	3-029-271-01	SPRING (HD)		70	3-007-428-01	WASHER (R)	
54	X-3377-362-1	PINCH LEVER (N) ASSY		71	3-029-283-01	GEAR, IDLER (A)	
55	3-029-276-01	WASHER (STOPPER R)		72	3-029-286-01	GEAR (NR)	
56	3-029-289-01	WASHER		73	3-029-765-01	SCREW (M1.4), TOOTHED LOCK	
57	3-029-275-01	WASHER (STOPPER N)		74	3-029-274-02	RETAINER (F2), MOTOR	
58	3-029-278-01	WASHER		75	3-007-433-01	SHEET (N), REFLECTION	
59	3-029-282-01	GEAR (Y)		76	3-010-273-02	GEAR (REEL)	
60	3-029-285-01	GEAR, CAM		77	X-3376-291-4	CHASSIS ASSY (F) (FX877)	
61	3-029-284-01	LEVER, TRIGGER		77	X-3377-037-2	CHASSIS ASSY (F) (M) (FX673)	
62	3-029-281-01	GEAR, IDLER (B)		78	3-029-288-01	PULLEY, REVERSE	
63	X-3376-813-1	CLUTCH ASSY (F)		79	3-010-954-01	SPRING (BT), COMPRESSION	
64	3-932-724-21	WASHER		80	3-010-274-02	TABLE, REEL	
65	3-386-694-01	WASHER		82	3-029-273-01	GEAR (FR)	
66	3-029-306-01	FLYWHEEL (N), INSERT (FX877)		HP901	1-500-576-11	HEAD, MAGNETIC (PLAYBACK)	
66	3-029-306-11	FLYWHEEL (N), INSERT (FX673)		M601	1-763-166-12	MOTOR (CAPSTAN/REEL)	
67	3-029-280-01	BELT (F2)		PM901	1-454-674-32	SOLENOID, PLUNGER	

SECTION 8 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation
AUS : Australian model EA : Saudi Arabia model HK : Hong Kong model
CH : Chinese model EE : East European model JE : Tourist model
CND : Canadian model FR : French model KR : Korean model

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS**
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS**
uF: μ F
- COILS**
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-3021-222-A	MAIN BOARD, COMPLETE (EXCEPT FX673: FR/FX877: JE)		C36	1-115-156-11	CERAMIC CHIP 1uF	10V
	A-3021-223-A	MAIN BOARD, COMPLETE (FX673: FR)		C37	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
	A-3021-237-A	MAIN BOARD, COMPLETE (FX877: JE)		C38	1-107-826-91	CERAMIC CHIP 0.1uF	10% 16V
		*****		C39	1-115-412-11	CERAMIC CHIP 680PF	5% 25V
				C40	1-127-578-91	TANTAL. CHIP 3.3uF	20% 6.3V
	1-694-502-11	CONDUCTIVE BOARD, CONNECTION		C41	1-110-563-11	CERAMIC CHIP 0.068uF	10% 16V
	3-034-073-01	HOLDER (LCD)		C42	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V
		< CAPACITOR >		C43	1-162-969-11	CERAMIC CHIP 0.0068uF	10% 25V
C1	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	C44	1-162-969-11	CERAMIC CHIP 0.0068uF	10% 25V
C2	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C45	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C3	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V	C46	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C4	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V	C47	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C5	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C48	1-115-156-11	CERAMIC CHIP 1uF	10V
C6	1-162-908-11	CERAMIC CHIP 3PF	0.25PF 50V	C49	1-162-917-11	CERAMIC CHIP 15PF	5% 50V
C7	1-164-676-11	CERAMIC CHIP 2200PF	5% 16V	C50	1-162-917-11	CERAMIC CHIP 15PF	5% 50V
C8	1-164-676-11	CERAMIC CHIP 2200PF	5% 16V	C51	1-125-984-21	TANTAL. CHIP 22uF	20% 4V
C9	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	C52	1-162-910-11	CERAMIC CHIP 5PF	0.25PF 50V
C10	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	C53	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C11	1-162-962-11	CERAMIC CHIP 470PF	10% 50V	C54	1-115-156-11	CERAMIC CHIP 1uF	10V
C12	1-162-905-11	CERAMIC CHIP 1PF	0.25PF 50V	C55	1-164-676-11	CERAMIC CHIP 2200PF	5% 16V
C13	1-107-817-11	TANTAL. CHIP 0.33uF	10% 16V	C56	1-162-910-11	CERAMIC CHIP 5PF	0.25PF 50V
C14	1-162-905-11	CERAMIC CHIP 1PF	0.25PF 50V	C57	1-162-910-11	CERAMIC CHIP 5PF	0.25PF 50V
C15	1-162-925-11	CERAMIC CHIP 68PF	5% 50V	C58	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C16	1-164-676-11	CERAMIC CHIP 2200PF	5% 16V	C59	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C17	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C60	1-164-676-11	CERAMIC CHIP 2200PF	5% 16V
C18	1-162-959-11	CERAMIC CHIP 330PF	5% 50V	C62	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C19	1-135-201-11	TANTAL. CHIP 10uF	20% 4V	C63	1-162-919-11	CERAMIC CHIP 22PF	5% 50V
C20	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V	C64	1-164-217-11	CERAMIC CHIP 150PF	5% 50V
C21	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	C65	1-107-826-91	CERAMIC CHIP 0.1uF	10% 16V
C22	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V	C66	1-164-245-11	CERAMIC CHIP 0.015uF	10% 25V
C23	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V	C80	1-115-156-11	CERAMIC CHIP 1uF	10V
C24	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V	C81	1-115-156-11	CERAMIC CHIP 1uF	10V
C25	1-164-315-11	CERAMIC CHIP 470PF	5% 50V	C101	1-125-984-21	TANTAL. CHIP 22uF	20% 4V
C26	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C104	1-113-619-11	CERAMIC CHIP 0.47uF	10% 6.3V
C27	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V	C105	1-115-156-11	CERAMIC CHIP 1uF	10V
C28	1-162-923-11	CERAMIC CHIP 47PF	5% 50V	C106	1-113-619-11	CERAMIC CHIP 0.47uF	10% 6.3V
C29	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C107	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C30	1-162-961-11	CERAMIC CHIP 330PF	10% 50V	C108	1-115-156-11	CERAMIC CHIP 1uF	10V
C31	1-164-362-11	CERAMIC CHIP 470PF	5% 50V	C110	1-164-677-11	CERAMIC CHIP 0.033uF	10% 16V
C32	1-125-984-21	TANTAL. CHIP 22uF	20% 4V	C111	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C33	1-115-156-11	CERAMIC CHIP 1uF	10V	C201	1-125-984-21	TANTAL. CHIP 22uF	20% 4V
C34	1-115-156-11	CERAMIC CHIP 1uF	10V	C204	1-113-619-11	CERAMIC CHIP 0.47uF	10% 6.3V
C35	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C205	1-115-156-11	CERAMIC CHIP 1uF	10V

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C206	1-115-156-11	CERAMIC CHIP	1uF		10V	D6	8-719-422-37	DIODE MA8051-TX			
C207	1-113-619-11	CERAMIC CHIP	0.47uF	10%	6.3V	D101	8-719-422-37	DIODE MA8051-TX			
C208	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	D201	8-719-422-37	DIODE MA8051-TX			
C210	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	D301	8-719-422-37	DIODE MA8051-TX			
C211	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	D302	8-719-422-37	DIODE MA8051-TX			
C301	1-119-663-11	TANTAL. CHIP	47uF	20%	2.5V	D303	8-719-422-37	DIODE MA8051-TX			
C302	1-107-815-11	TANTAL. CHIP	2.2uF	20%	4V	D304	8-719-422-37	DIODE MA8051-TX			
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V	D305	8-719-422-37	DIODE MA8051-TX			
C304	1-125-984-21	TANTAL. CHIP	22uF	20%	4V	D801	8-719-049-09	DIODE 1SS367-T3SONY			
C305	1-125-984-21	TANTAL. CHIP	22uF	20%	4V	D802	8-719-420-87	DIODE MA8130-TX			
C306	1-113-619-11	CERAMIC CHIP	0.47uF	10%	6.3V	D803	8-719-404-50	DIODE MA111-TX			
C307	1-117-181-11	TANTAL. CHIP	4.7uF	20%	2.5V	D804	8-719-420-51	DIODE MA729-TX			
C308	1-117-181-11	TANTAL. CHIP	4.7uF	20%	2.5V			< FUSE >			
C309	1-135-149-21	TANTAL. CHIP	2.2uF	20%	10V	F1	1-533-792-11	FUSE (SMD) 0.25A/125V			
C310	1-164-360-11	CERAMIC CHIP	0.1uF		16V			< FERRITE BEAD >			
C311	1-165-112-11	CERAMIC CHIP	0.33uF		16V	FB1	1-500-445-21	FERRITE 0uH			
C312	1-165-128-11	CERAMIC CHIP	0.22uF		16V	FB2	1-500-445-21	FERRITE 0uH			
C313	1-115-156-11	CERAMIC CHIP	1uF		10V	FB3	1-500-445-21	FERRITE 0uH			
C314	1-165-128-11	CERAMIC CHIP	0.22uF		16V	FB4	1-500-245-11	FERRITE 0uH			
C315	1-115-156-11	CERAMIC CHIP	1uF		10V	FB5	1-500-245-11	FERRITE 0uH			
C316	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	FB6	1-500-245-11	FERRITE 0uH			
C317	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB7	1-500-245-11	FERRITE 0uH			
C318	1-135-201-11	TANTAL. CHIP	10uF	20%	4V			< IC >			
C319	1-164-360-11	CERAMIC CHIP	0.1uF		16V	IC1	8-759-362-23	IC TA7371AF-EL			
C320	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	IC2	8-759-362-25	IC TA2022AFN-EL			
C321	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	IC3	8-759-594-67	IC TC9327AF-606			
C325	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V	IC4	8-759-457-68	IC AK93C45AV-L			
C601	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V	IC5	8-759-387-31	IC TC75S55F (TE85R)			
C602	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	IC6	8-759-457-70	IC XC62RP1602MR			
C603	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	IC301	8-759-579-12	IC TA2123AF (EL)			
C604	1-164-360-11	CERAMIC CHIP	0.1uF		16V	IC302	8-759-488-80	IC NJM2185AV-TE2			
C605	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	IC601	8-759-356-46	IC MM1279XVBE			
C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	IC801	8-759-553-28	IC XC6383C251ML			
C607	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V			< JACK >			
C608	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	J701	1-779-867-81	JACK (♂) REMOTE)			
C803	1-135-177-21	TANTAL. CHIP	1uF	20%	20V			< SHORT >			
C804	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	JC101	1-216-864-11	METAL CHIP 0 5% 1/16W			
C805	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V	JC201	1-216-864-11	METAL CHIP 0 5% 1/16W			
C806	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V			(EXCEPT FX673: FR)			
C807	1-125-984-21	TANTAL. CHIP	22uF	20%	4V			(EXCEPT FX673: FR)			
C808	1-115-156-11	CERAMIC CHIP	1uF		10V			< COIL >			
C809	1-127-808-91	TANTAL. CHIP	10uF	20%	6.3V	L1	1-469-373-21	INDUCTOR CHIP 95nH			
C810	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	L2	1-416-941-21	COIL (FM OSC)			
C811	1-115-156-11	CERAMIC CHIP	1uF		10V	L3	1-410-997-42	INDUCTOR CHIP 2.2uH			
C812	1-125-984-21	TANTAL. CHIP	22uF	20%	4V	L4	1-412-995-21	INDUCTOR CHIP 22uH			
C813	1-115-156-11	CERAMIC CHIP	1uF		10V	L5	1-754-046-11	ANTENNA, FERRITE-ROD (AM)			
CB301	1-127-678-21	CERAMIC CHIP	330PF	0	50V	L6	1-412-995-21	INDUCTOR CHIP 22uH			
		< FILTER >				L7	1-412-967-31	INDUCTOR CHIP 0.1uH			
CF1	1-767-362-11	FILTER, CERAMIC (10.7MHz)				L8	1-412-967-31	INDUCTOR CHIP 0.1uH			
CF2	1-767-480-11	FILTER, CERAMIC (AM) (450kHz)				L801	1-412-034-11	INDUCTOR CHIP 330uH			
		< DIODE >				L802	1-412-995-21	INDUCTOR CHIP 22uH			
D1	8-719-053-30	DIODE MA357 (E)-(TX).SO									
D2	8-719-053-30	DIODE MA357 (E)-(TX).SO									
D3	8-719-072-58	DIODE SVC347-TL									
D4	8-719-404-50	DIODE MA111-TX									
D5	8-719-049-09	DIODE 1SS367-T3SONY									

MAIN

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description				Remark
L803	1-412-010-41	INDUCTOR CHIP	22uH				R15	1-216-833-11	RES,CHIP	10K	5%	1/16W	
		< LIQUID CRYSTAL DISPLAY >				R16	1-216-853-11	METAL CHIP	470K	5%	1/16W		
						R17	1-216-821-11	METAL CHIP	1K	5%	1/16W		
						R18	1-216-849-11	METAL CHIP	220K	5%	1/16W		
ND1	1-803-469-11	DISPLAY PANEL, LIQUID CRYSTAL					R19	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
		< PHOTO REFLECTOR >				R20	1-216-821-11	METAL CHIP	1K	5%	1/16W		
						R21	1-216-829-11	METAL CHIP	4.7K	5%	1/16W		
						R22	1-216-845-11	METAL CHIP	100K	5%	1/16W		
PH1	8-749-014-43	PHOTO REFLECTOR PR-20-T					R23	1-216-821-11	METAL CHIP	1K	5%	1/16W	
		< TRANSISTOR >				R24	1-216-821-11	METAL CHIP	1K	5%	1/16W		
						R25	1-216-845-11	METAL CHIP	100K	5%	1/16W		
Q1	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO				R26	1-216-833-11	RES,CHIP	10K	5%	1/16W	
Q2	8-729-028-69	TRANSISTOR	2SC4655-BC (TX)				R27	1-216-853-11	METAL CHIP	470K	5%	1/16W	
Q3	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO				R28	1-216-845-11	METAL CHIP	100K	5%	1/16W	
Q4	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO				R29	1-216-839-11	METAL CHIP	33K	5%	1/16W	
Q5	8-729-231-96	FET	2SK880GR-TE85L				R30	1-216-833-11	RES,CHIP	10K	5%	1/16W	
Q6	8-729-028-69	TRANSISTOR	2SC4655-BC (TX)				R31	1-216-843-11	METAL CHIP	68K	5%	1/16W	
Q7	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO				R32	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
Q8	8-729-037-64	TRANSISTOR	UN9116J-(TX).SO				R33	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
Q9	8-729-823-86	TRANSISTOR	2SA1745-TL				R34	1-216-857-11	METAL CHIP	1M	5%	1/16W	
Q10	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO				R35	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
Q11	8-729-037-63	TRANSISTOR	UN9115J-(TX).SO				R36	1-216-849-11	METAL CHIP	220K	5%	1/16W	
Q12	8-729-037-71	TRANSISTOR	UN9210J-(TX).SO				R37	1-216-857-11	METAL CHIP	1M	5%	1/16W	
Q13	8-729-037-71	TRANSISTOR	UN9210J-(TX).SO				R38	1-216-853-11	METAL CHIP	470K	5%	1/16W	
Q14	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO				R39	1-216-815-11	METAL CHIP	330	5%	1/16W	
Q15	8-729-425-46	TRANSISTOR	XP4315-TXE				R40	1-216-833-11	RES,CHIP	10K	5%	1/16W	
Q16	8-729-013-60	TRANSISTOR	UN9216J-(TX).SO				R41	1-218-871-11	RES,CHIP	10K	0.5%	1/16W	
Q17	8-729-800-71	TRANSISTOR	2SB1295-UL6-TB				R42	1-218-839-11	RES,CHIP	470	0.5%	1/16W	
Q18	8-729-427-72	TRANSISTOR	XP4501-TXE				R43	1-216-849-11	METAL CHIP	220K	5%	1/16W	
Q19	8-729-426-36	TRANSISTOR	XP1215-TXE				R44	1-216-851-11	METAL CHIP	330K	5%	1/16W	
Q20	8-729-037-71	TRANSISTOR	UN9210J-(TX).SO				R45	1-216-855-11	METAL CHIP	680K	5%	1/16W	
Q301	8-729-800-71	TRANSISTOR	2SB1295-UL6-TB				R46	1-216-821-11	METAL CHIP	1K	5%	1/16W	
Q302	8-729-037-71	TRANSISTOR	UN9210J-(TX).SO				R47	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	
Q303	8-729-426-36	TRANSISTOR	XP1215-TXE				R48	1-218-863-11	RES,CHIP	4.7K	0.5%	1/16W	
Q304	8-729-037-62	TRANSISTOR	UN9114J-(TX).SO				R49	1-218-911-11	RES,CHIP	470K	0.5%	1/16W	
Q305	8-729-426-36	TRANSISTOR	XP1215-TXE				R50	1-218-855-11	RES,CHIP	2.2K	0.5%	1/16W	
Q601	8-729-037-71	TRANSISTOR	UN9210J-(TX).SO				R51	1-218-847-11	RES,CHIP	1K	0.5%	1/16W	
Q801	8-729-800-37	TRANSISTOR	2SD1048X6-TB				R52	1-218-859-11	RES,CHIP	3.3K	0.5%	1/16W	
Q802	8-729-400-55	TRANSISTOR	2SD1328-S-TX				R53	1-218-859-11	RES,CHIP	3.3K	0.5%	1/16W	
Q803	8-729-800-71	TRANSISTOR	2SB815B7-TB				R54	1-218-859-11	RES,CHIP	3.3K	0.5%	1/16W	
Q804	8-729-800-71	TRANSISTOR	2SB815B7-TB				R55	1-218-863-11	RES,CHIP	4.7K	0.5%	1/16W	
Q805	8-729-037-71	TRANSISTOR	UN9210J-(TX).SO				R56	1-218-875-11	RES,CHIP	15K	0.5%	1/16W	
		< RESISTOR >					R58	1-216-833-11	RES,CHIP	10K	5%	1/16W	
R1	1-216-841-91	METAL CHIP	47K	5%	1/16W		R59	1-216-833-11	RES,CHIP	10K	5%	1/16W	
R2	1-216-823-91	METAL CHIP	1.5K	5%	1/16W		R60	1-216-833-11	RES,CHIP	10K	5%	1/16W	
R3	1-216-809-11	METAL CHIP	100	5%	1/16W		R61	1-216-833-11	RES,CHIP	10K	5%	1/16W	
R4	1-216-825-11	METAL CHIP	2.2K	5%	1/16W		R62	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R5	1-216-821-11	METAL CHIP	1K	5%	1/16W		R63	1-216-853-11	METAL CHIP	470K	5%	1/16W	
							R64	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R6	1-216-817-11	METAL CHIP	470	5%	1/16W		R65	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R7	1-216-845-11	METAL CHIP	100K	5%	1/16W		R66	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R8	1-216-853-11	METAL CHIP	470K	5%	1/16W								
R9	1-216-817-11	METAL CHIP	470	5%	1/16W		R67	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R10	1-216-829-11	METAL CHIP	4.7K	5%	1/16W		R68	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
							R69	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R11	1-216-833-11	RES,CHIP	10K	5%	1/16W		R70	1-218-895-11	RES,CHIP	100K	0.5%	1/16W	
R12	1-216-833-11	RES,CHIP	10K	5%	1/16W		R71	1-218-851-11	RES,CHIP	1.5K	0.5%	1/16W	
R13	1-216-837-11	METAL CHIP	22K	5%	1/16W								
R14	1-216-845-11	METAL CHIP	100K	5%	1/16W		R72	1-218-871-11	RES,CHIP	10K	0.5%	1/16W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R73	1-218-831-11	RES,CHIP	220 0.5% 1/16W	R803	1-216-817-11	METAL CHIP	470 5% 1/16W
R74	1-218-875-11	RES,CHIP	15K 0.5% 1/16W	R804	1-216-805-11	METAL CHIP	47 5% 1/16W
R75	1-218-839-11	RES,CHIP	470 0.5% 1/16W	R805	1-216-819-11	METAL CHIP	680 5% 1/16W
R76	1-218-875-11	RES,CHIP	15K 0.5% 1/16W				
R77	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R806	1-216-819-11	METAL CHIP	680 5% 1/16W
R101	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R807	1-216-845-11	METAL CHIP	100K 5% 1/16W
R102	1-216-837-11	METAL CHIP	22K 5% 1/16W			< COMPOSITION CIRCUIT BLOCK >	
R103	1-216-789-11	METAL CHIP	2.2 5% 1/16W	RB1	1-233-811-21	RES, NETWORK 470K (3216)	
R104	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	RB601	1-233-873-21	RES, NETWORK 220K (CHIP TYPE) (3216)	
						< VARIABLE RESISTOR >	
R105	1-216-823-11	METAL CHIP	1.5K 5% 1/16W				
R106	1-216-811-11	METAL CHIP	150 5% 1/16W				
			(EXCEPT FX673: FR)	RV1	1-223-587-11	RES, ADJ, CARBON 22K	
R106	1-216-821-11	METAL CHIP	1K 5% 1/16W	RV301	1-225-684-21	RES, VAR, CARBON 30K/30K (VOL)	
			(FX673: FR)	RV601	1-223-584-11	RES, ADJ, CARBON 2.2K	
R107	1-216-837-11	METAL CHIP	22K 5% 1/16W			< SWITCH >	
R108	1-216-811-11	METAL CHIP	150 5% 1/16W				
				S1	1-771-475-21	SWITCH, SLIDE (DIRECTION)	
R109	1-216-831-11	METAL CHIP	6.8K 5% 1/16W	S2	1-572-922-11	SWITCH, SLIDE (HOLD)	
R110	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	S3	1-771-053-21	SWITCH, KEY BOARD (■ RADIO OFF)	
R111	1-216-849-11	METAL CHIP	220K 5% 1/16W	S4	1-771-053-21	SWITCH, KEY BOARD	
						(TUNE/PRESET +, FF AMS)	
R112	1-216-807-11	METAL CHIP	68 5% 1/16W				
			(FX673: FR)	S5	1-771-053-21	SWITCH, KEY BOARD	
R201	1-216-823-11	METAL CHIP	1.5K 5% 1/16W			(TUNE/PRESET -, REW AMS)	
R202	1-216-837-11	METAL CHIP	22K 5% 1/16W	S6	1-771-053-21	SWITCH, KEY BOARD (MENU)	
R203	1-216-789-11	METAL CHIP	2.2 5% 1/16W	S7	1-771-053-21	SWITCH, KEY BOARD (SET)	
R204	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	S8	1-771-053-21	SWITCH, KEY BOARD (BAND, RADIO ON)	
R205	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	S9	1-771-053-21	SWITCH, KEY BOARD (◀▶ REPEAT)	
				S10	1-771-053-21	SWITCH, KEY BOARD	
R206	1-216-811-11	METAL CHIP	150 5% 1/16W			(ENTER, COUNTER RESET)	
			(EXCEPT FX673: FR)			< TRANSFORMER >	
R206	1-216-821-11	METAL CHIP	1K 5% 1/16W				
			(FX673: FR)	T1	1-416-943-21	COIL (AM OSC)	
R207	1-216-837-11	METAL CHIP	22K 5% 1/16W	T2	1-416-942-21	COIL (AM IF)	
R208	1-216-811-11	METAL CHIP	150 5% 1/16W	T801	1-423-745-11	TRANSFORMER, DC-DC CONVERTER	
R209	1-216-831-11	METAL CHIP	6.8K 5% 1/16W			< THERMISTOR >	
R210	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	THP601	1-810-794-11	THERMISTOR, POSITIVE	
R211	1-216-849-11	METAL CHIP	220K 5% 1/16W			< VIBRATOR >	
R212	1-216-807-11	METAL CHIP	68 5% 1/16W				
			(FX673: FR)	X1	1-767-357-11	FILTER, CERAMIC (10.7MHz)	
R301	1-216-849-11	METAL CHIP	220K 5% 1/16W	X2	1-579-615-11	VIBRATOR, CRYSTAL (75kHz)	
R302	1-216-833-11	RES,CHIP	10K 5% 1/16W			*****	
R303	1-216-835-11	METAL CHIP	15K 5% 1/16W				
R304	1-216-837-11	METAL CHIP	22K 5% 1/16W			MISCELLANEOUS	

R305	1-216-789-11	METAL CHIP	2.2 5% 1/16W	HP901	1-500-576-11	HEAD, MAGNETIC (PLAYBACK)	
R306	1-216-851-11	METAL CHIP	330K 5% 1/16W	M601	1-763-166-12	MOTOR (CAPSTAN/REEL)	
R307	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	PM901	1-454-674-32	SOLENOID, PLUNGER	
R308	1-218-887-11	RES,CHIP	47K 0.5% 1/16W	S901	1-762-553-11	SWITCH, LEAF (TAPE DETECT, ATS)	
R309	1-216-841-11	METAL CHIP	47K 5% 1/16W			*****	
						ACCESSORIES & PACKING MATERIALS	

R310	1-216-845-11	METAL CHIP	100K 5% 1/16W				
R311	1-216-841-11	METAL CHIP	47K 5% 1/16W				
R312	1-216-845-11	METAL CHIP	100K 5% 1/16W				
R313	1-218-899-11	RES,CHIP	150K 0.5% 1/16W				
R601	1-216-837-11	METAL CHIP	22K 5% 1/16W				
R602	1-216-809-11	METAL CHIP	100 5% 1/16W				
R603	1-216-829-11	METAL CHIP	4.7K 5% 1/16W				
R604	1-216-823-11	METAL CHIP	1.5K 5% 1/16W				
R605	1-216-833-11	RES,CHIP	10K 5% 1/16W				
R607	1-216-845-11	METAL CHIP	100K 5% 1/16W				
R801	1-216-849-11	METAL CHIP	220K 5% 1/16W				
R802	1-216-829-11	METAL CHIP	4.7K 5% 1/16W				

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
	1-528-543-11	BATTERY, NICKEL CADMIUM (NC-6WM) (FX673: E, EA, HK, AUS/FX877: CH)	
	1-528-543-22	BATTERY, NICKEL CADMIUM (NC-6WM) (FX673: AEP, UK, E, FR, EE, EA, HK, AUS/ FX877)	
△	1-528-580-21	BATTERY CHARGER (BC-7HT) (FX877: JE)	
△	1-528-661-14	BATTERY CHARGER (BC-7DR) (FX877: KR)	
△	1-528-713-21	BATTERY CHARGER (BC-7DC) (FX673: CND)	
△	1-528-744-23	BATTERY CHARGER (BC-7DY) (FX673: AEP, FR, EE, EA)	
△	1-528-822-11	BATTERY CHARGER (BC-7DN) (FX877: CH)	
△	1-569-007-11	ADAPTOR, CONVERSION 2P (FX877: JE)	
	1-759-213-11	CASE, BATTERY (FX673: CND, E, EA, HK, AUS/FX877)	
	1-759-700-21	CASE, BATTERY (FX673: AEP, UK, FR, EE)	
	3-008-521-01	CASE, BATTERY CHARGE (FX673/FX877: CH, KR)	
	3-008-521-21	CASE, BATTERY CHARGE (FX877: JE)	
	3-029-236-01	CARD, WARRANTY (P10) (FX877: JE)	
	3-029-488-01	POUCH, CARRYING	
	3-864-890-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (FX673: CND, AEP, UK, FR, EE, EA, AUS, CH)	
	3-864-890-21	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (FX673: AEP, EE)	
	3-864-890-31	MANUAL, INSTRUCTION (GERMAN, ITALIAN) (FX673: AEP)	
	3-864-890-41	MANUAL, INSTRUCTION (DUTCH, SWEDISH) (FX673: AEP)	
	3-864-890-51	MANUAL, INSTRUCTION (FINNISH) (FX673: AEP)	
	3-864-890-61	MANUAL, INSTRUCTION (POLISH, RUSSIAN) (FX673: EE)	
	3-864-890-71	MANUAL, INSTRUCTION (ENGLISH, CHINESE) (FX673: E, HK)	
	3-864-890-81	MANUAL, INSTRUCTION (ARABIC, CHINESE) (FX673: EA, CH)	
	3-866-189-11	MANUAL, INSTRUCTION (ENGLISH, KOREAN) (FX877: KR)	
	3-866-189-21	MANUAL, INSTRUCTION (JAPANESE, ENGLISH, KOREAN, CHINESE) (FX877: JE)	
	3-866-189-31	MANUAL, INSTRUCTION (ENGLISH, CHINESE) (FX877: CH)	
	8-953-272-90	HEADPHONE MDR-ED136SP//K SET (FX673: AEP, UK, E, FR, CET, EA, HK, AUS/ FX877: KR)	
	8-953-304-90	RECEIVER MDR-E805SP SET (FX673: CND/FX877: CH, JE)	

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